

**NEC**

# LCD Projector GT2150

## User's Manual

---



## LIMITED WARRANTY

Except as specified below, the warranty that may be provided by the dealer covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
  - a. Accident, misuse, abuse, neglect, fire, water, dust, smoke, lightning or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - b. Repair or attempted repair by non-authorized persons.
  - c. Any shipment of product (claim must be presented to the carrier).
  - d. Removal or installation of the product.
  - e. Any other causes which do not relate to a product defect.
3. Cartons, carrying cases, batteries, external cabinets, CDROM, or any accessories used in connection with the product.
4. Removal or installation charges.
5. Cost of initial technical adjustments (set-up), including adjustment of user controls. These costs are the responsibility of the dealer from whom the product was purchased.
6. Payment of shipping charges.

## GARANTIE LIMITEE

Mis à part les points indiqués ci-dessous, la garantie pouvant être couverte par le revendeur comporte l'ensemble des défauts se rapportant au matériel ou aux travaux d'assemblage sur ce produit. Les points suivants ne sont pas couverts par la garantie:

1. Les produits dont le numéro de série a été effacé, modifié ou retiré.
2. Dommages, dégâts ou dysfonctionnement suite à:
  - a. Un accident, mauvaise utilisation, abus, négligences, incendies, dégâts dus aux eaux, à la poussière, à la fumée, aux éclairs ou autres phénomènes naturels, à une modification non autorisée du produit, ou à la non-conformité aux instructions fournies avec le produit.
  - b. Réparation ou tentative de réparation par des personnes non autorisées.
  - c. Toute expédition du produit (les plaintes doivent être adressées à la société de frêt).
  - d. Démontage ou installation du produit.
  - e. Toute autre cause ne se rapportant pas à un défaut du produit.
3. Les cartons, boîtes, piles, caissons externes, CDROM, ou tout autre accessoire utilisé avec ce produit.
4. Prix de démontage ou d'installation.
5. Coût des réglages techniques de base (mise au point), incluant les réglages des commandes utilisateurs. Ces coûts sont placés sous la responsabilité du revendeur auprès duquel le produit a été acheté.
6. Paiement des frais de transport.

## BESCHRÄNKTE GARANTIE

Außer in den unten beschriebenen Fällen deckt die vom Händler unter Umständen gewährte Garantie alle Material- oder Herstellungsfehler dieses Produktes ab. In den folgenden Fällen wird keine Garantie gewährt:

1. Wenn die Seriennummer des Produktes unleserlich gemacht, geändert oder entfernt worden ist.
2. Bei einer Beschädigung, Beeinträchtigung oder Funktionsstörung, die aus folgenden Fällen resultiert:
  - a. Unfall, falscher Gebrauch, Missbrauch, Fahrlässigkeit, Feuer, Wasser, Staub, Rauch, Blitzeinschlag oder andere Naturereignisse, nicht autorisierte Veränderungen des Produktes oder die Missachtung der dem Produkt beigefügten Anleitung.
  - b. Reparatur oder der Versuch einer Reparatur durch nicht autorisierte Personen.
  - c. Jeglicher Transport des Produktes (die Haftung liegt in diesem Fall bei der den Transport durchführenden Person).
  - d. Entfernung oder Installation des Produktes.
  - e. Jegliche andere Ursachen, die nicht mit einem Defekt dieses Produktes zusammenhängen.
3. Verwendung von Kartons, Transportkisten, Batterien, Außengehäusen, CD-ROMs oder anderem Zubehör zusammen mit diesem Produkt.
4. Entfernungs- oder Installationsforderungen und -kosten.
5. Kosten der technischen Anfangseinstellungen (Setup), einschließlich der Einstellungen der Benutzersteuerungen. Diese Kosten sind vom Händler zu tragen, von dem das Produkt erworben wurde.
6. Bezahlung von Transportkosten.

## GARANZIA LIMITATA

A parte la specificazione seguente, la garanzia che potrebbe essere fornita dal rivenditore copre tutti i difetti di materiali o nella lavorazione in questo prodotto. I seguenti non sono coperti dalla garanzia:

1. Ogni prodotto che ha il numero seriale difettoso, modificato o rimosso.
2. Danni, deterioramento o malfunzionamento risultanti da:
  - a. Incidenti, abuso, cattivo uso, negligenza, fuoco, acqua, polvere, fumo, fulmini o altri atti naturali di tipo naturale, modifiche inautorizzate del prodotto, o errori nel seguire le istruzioni fornite con il prodotto.
  - b. Riparazioni o tentativi di riparazioni effettuati da persona non autorizzate.
  - c. Qualsiasi trasporto del prodotto (i reclami devono essere presentati dal corriere).
  - d. Rimozione o installazione del prodotto.
  - e. ogni altra causa non relativa ad un deficit del prodotto.
3. Cartoni, scatole di trasporto, batterie, armadietti esterni, CDROM, o qualsiasi altro accessorio annesso al prodotto.
4. Carichi di rimozione o installazione.
5. Costi di aggiustamenti tecnici iniziali (set-up), includendo i comandi di regolazione. Il rivenditore dal quale avete acquistato il prodotto è responsabile di ciò.
6. Pagamento delle spese di consegna.

## GARANTÍA LIMITADA

A excepción de lo que se especifica abajo, la garantía que puede ser suministrada por el distribuidor cubre todos los defectos en material o elaboración en este producto. Lo siguiente no es cubierto por la garantía:

1. Cualquier producto en el cual el número serial haya sido desfigurado, modificado o removido.
2. Daños, deterioro o malfuncionamiento resultado de:
  - a. Accidente, mal manejo, abuso, negligencia, fuego, agua, polvo, humo, relámpagos u otros fenómenos naturales, modificaciones del producto sin autorización, fallas en el seguimiento de las instrucciones suministradas con el producto.
  - b. Reparación o intentos de reparación por personas no autorizadas.
  - c. Cualquier envío del producto (el reclamo debe presentarse al transportador).
  - d. Remoción o instalación del producto.
  - e. Cualquier otra causa que no este relacionada con un defecto del producto.
3. Cartones, estuches de transporte, pilas, gabinetes externos, CDROM, o cualquier accesorio utilizado en conexión con el producto.
4. Costos por instalación o remoción.
5. Costo de los ajustes técnicos iniciales (configuración), incluyendo el ajuste de los controles de usuario. Estos costos son responsabilidad del distribuidor donde se adquirió el producto.
6. Pago de los costos de envío.

## BEGRÄNSAD GARANTI

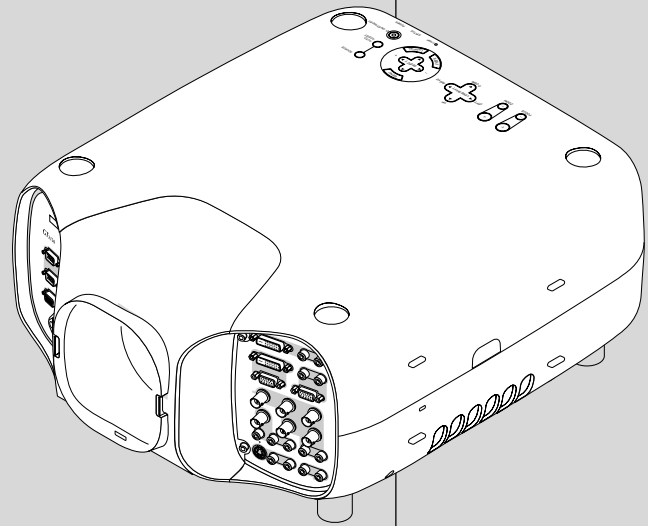
Garantin som ges av återförsäljaren täcker alla brister i material och utförande med undantag av vad som anges nedan. Följande täcks inte av garantin:

1. Produkter vars serienummer har blivit oläsligt, modifierats eller tagits bort.
2. Skador, försämring eller felfunktion som beror på:
  - a. Olyckor, fel bruk, missbruk, vanskötsel, brand, vatten, rök, stoft, åska eller annan orsak som beror på naturen, icke auktoriserad modifikation av produkten samt underlåtenhet att följa anvisningarna som lämnas med produkten.
  - b. Reparationer eller försök på reparation av icke auktoriserade personer.
  - c. Transportskador (dessa bör riktas till transportföretaget).
  - d. Avmontering eller installation av produkten.
  - e. Övriga orsaker som inte har något samband med produktens fel.
3. Förpackningslådor, bärväskor, batterier, externa höljen, CD-ROM-skivor samt andra tillbehör som används tillsammans med produkten.
4. Avmonterings- och installationskostnader.
5. Kostnader för tekniska justeringar (inställning), inklusive justering av användarreglagen. Dessa kostnader är återförsäljarens ansvar där produkten köpts.
6. Betalning för transportkostnader.

LCD Projector

GT2150

User's Manual



# IMPORTANT INFORMATION

## Precautions

Please read this manual carefully before using your NEC GT2150 Projector and keep the manual handy for future reference. Your serial number is located on the bottom of your GT2150. Record it here:

### CAUTION



To turn off main power, be sure to remove the plug from power outlet. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.

### CAUTION



TO PREVENT SHOCK, DO NOT OPEN THE CABINET. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED NEC SERVICE PERSONNEL.



This symbol warns the user that uninsulated voltage within the unit may be sufficient to cause electrical shock. Therefore, it is dangerous to make any kind of contact with any part inside of the unit.



This symbol alerts the user that important information concerning the operation and maintenance of this unit has been provided. The information should be read carefully to avoid problems.

## WARNING

TO PREVENT FIRE OR SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

DO NOT USE THIS UNIT'S GROUNDED PLUG WITH AN EXTENSION CORD OR IN AN OUTLET UNLESS ALL THREE PRONGS CAN BE FULLY INSERTED.

DO NOT OPEN THE CABINET. THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. ALL SERVICING MUST BE DONE BY QUALIFIED NEC SERVICE PERSONNEL.

## DOC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

3. GSGV Acoustic Noise Information Ordinance:  
The sound pressure level is less than 70 dB (A) according to ISO 3744 or ISO 7779.

## RF Interference

### WARNING

The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by NEC Technologies in this manual. Failure to comply with this government regulation could void your right to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

In UK, a BS approved power cable with moulded plug has a Black (five Amps) fuse installed for use with this equipment. If a power cable is not supplied with this equipment please contact your supplier.

- IBM is a registered trademark of International Business Machines Corporation.
- Macintosh and PowerBook are registered trademarks of Apple Computer, Inc.
- Other product and company names mentioned in this user's manual may be the trademarks of their respective holders.

# INFORMATIONS IMPORTANTES

---

## Précautions

Veuillez lire ce manuel avec attention avant d'utiliser votre projecteur NEC GT2150 et gardez ce manuel à portée de main afin de pouvoir y recourir facilement.

Votre numéro de série est situé sur le fond de votre GT2150. Reportez-le ici:

### ATTENTION



Pour couper complètement l'alimentation, retirez la prise du secteur.

La prise du secteur doit être accessible et installée le plus près possible de l'appareil.

### ATTENTION



POUR ÉVITER TOUT CHOC ÉLECTRIQUE, N'OUVREZ PAS LE BOÎTIER. LES PIÈCES INTERNES NE SONT PAS RÉPARABLES PAR L'UTILISATEUR. POUR TOUTE RÉPARATION, ADRESSEZ-VOUS À UN RÉPARATEUR AGRÉE NEC.



Ce symbole avertit l'utilisateur que le contact avec certaines parties non isolées à l'intérieur de l'appareil risque de causer une électrocution. Il est donc dangereux de toucher quoi que ce soit à l'intérieur de l'appareil.



Ce symbole avertit l'utilisateur que d'importantes informations sont fournies sur le fonctionnement ou l'entretien de cet appareil. Ces informations doivent être lues attentivement pour éviter tout problème.

## AVERTISSEMENT

AFIN DE PREVENIR TOUT RISQUE D'INCENDIE OU DE CHOC ÉLECTRIQUE, N'EXPOSEZ PAS CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ. N'UTILISEZ PAS LA PRISE AVEC TERRE DE L'APPAREIL AVEC UNE RALLONGE OU UNE AUTRE PRISE, A MOINS QUE LES TROIS BROCHES PUISSENT ÊTRE COMPLÈTEMENT INSÉRÉES. N'OUVREZ PAS LE BOÎTIER. À L'INTÉRIEUR SE TROUVENT DES COMPOSANTS À HAUTE TENSION. TOUTE RÉPARATION DOIT ÊTRE FAITE PAR DU PERSONNEL AGRÉE NEC.

## DOC avis de conformation

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le Matériel Brouilleur du Canada.

3. Règlement sur les informations concernant les nuisances acoustiques GSGV:  
Le niveau de pression sonore est inférieur à 70 dB (A) conformément à la norme ISO 3744 ou ISO 7779.

- IBM est une marque déposées de International Business Machines Corporation.
- Macintosh et PowerBook sont des marques déposées de Apple Computer, Inc.
- Tous les autres marques et les noms de produits sont des marques de fabrique ou des marques déposées de leurs compagnies respectives.

## Important Safeguards

These safety instructions are to ensure the long life of your projector and to prevent fire and shock. Please read them carefully and heed all warnings.

## Installation

1. For best results, use your projector in a darkened room.
2. Place the projector on a flat, level surface in a dry area away from dust and moisture.
3. Do not place your projector in direct sunlight, near heaters or heat radiating appliances.
4. Exposure to direct sunlight, smoke or steam can harm internal components.
5. Handle your projector carefully. Dropping or jarring can damage internal components.
6. Do not place heavy objects on top of the projector.
7. **If you wish to have the projector installed on the ceiling:**
  - a. Do not attempt to install the projector yourself.
  - b. The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
  - c. In addition, the ceiling must be strong enough to support the projector and the installation must be in accordance with any local building codes.
  - d. Please consult your dealer for more information.

## To Dealer or Installer:

To prevent the projector from falling, install it in a place and fasten it in a way with sufficient strength to support the combined weight (17.0 kg/37.5 lbs) of the projector (12.8 kg/28.3 lbs), the lens (2.0 kg/4.4 lbs) and the ceiling mount(2.1 kg/4.7 lbs) for an extended period of time as well as to withstand earthquakes.

## Power Supply

1. The projector is designed to operate on a power supply of 100-120 or 200-240 V 50/60 Hz AC. Ensure that your power supply fits this requirement before attempting to use your projector.
2. Handle the power cable carefully and avoid excessive bending. A damaged cord can cause electric shock or fire.
3. If the projector is not to be used for an extended period of time, disconnect the plug from the power outlet.

## Cleaning

1. Unplug the projector before cleaning.
2. Clean the cabinet periodically with a damp cloth. If heavily soiled, use a mild detergent. Never use strong detergents or solvents such as alcohol or thinner.
3. Use a blower or lens paper to clean the lens, and be careful not to scratch or mar the lens.

### CAUTION

Do not unplug the power cable from the wall outlet under any one of the following circumstances. Doing so can cause damage to the projector:

- While the message "Please wait a moment." appears. This message will be displayed after the projector is turned off.
- Immediately after the power cable is plugged into the wall outlet (the POWER indicator has not changed to a steady orange glow).
- Immediately after the cooling fan stops working (The cooling fan continues to work for three minutes after the projector is turned off with the POWER button).
- While the POWER and the STATUS indicators are alternately flashing.

### CAUTION

- Do not put the projector on its side when the lamp is turned on. Doing so may cause damage to the projector.
- Before shipping this projector, remove the lens and attach the lens hood cap. The Lens Shift mechanism may encounter damage caused by improper handling during transportation.

## Lamp Replacement

- To replace the lamp, follow all instructions provided on page E-52.
- Be sure to replace the lamp when the message "**The Lamp has reached the end of its usable life. Please replace the lamp.**" appears. If you continue to use the lamp after the lamp has reached the end of its usable life, the lamp bulb may shatter, and pieces of glass may be scattered in the lamp case. Do not touch them as the pieces of glass may cause injury. If this happens, contact your NEC dealer for lamp replacement.
- Allow a minimum of three minutes to elapse after turning off the projector. Then disconnect the power cable and allow 60 minutes to cool the projector before replacing the lamp.

## Fire and Shock Precautions

1. Ensure that there is sufficient ventilation and that vents are unobstructed to prevent the build-up of heat inside your projector. Allow at least 3 inches (10 cm) of space between your projector and a wall.
2. Prevent foreign objects such as paper clips and bits of paper from falling into your projector. Do not attempt to retrieve any objects that might fall into your projector. Do not insert any metal objects such as a wire or screwdriver into your projector. If something should fall into your projector, disconnect it immediately and have the object removed by a qualified NEC service personnel.
3. Do not place any liquids on top of your projector.
4. When using a LAN cable:  
For safety, do not connect to the connector for peripheral device wiring that might have excessive Voltage.

### CAUTION

- Do not look into the lens while the projector is on. Serious damage to your eyes could result.
- Keep any items such as magnifying glass out of the light path of the projector. The light being projected from the lens is extensive, therefore any kind of abnormal objects that can redirect light coming out of the lens, can cause unpredictable outcome such as fire or injury to the eyes.
- Do not cover the lens with the supplied lens hood cap or equivalent while the projector is on. Doing so can lead to melting of the cap and possibly burning your hands due to the heat emitted from the light output.

## Mesures de sécurité importantes

Ces instructions de sécurité garantissent la longévité de votre projecteur et préviennent les risques d'incendie et de décharge électrique. Lisez-les et respectez les conseils.

## Installation

1. Pour de meilleurs résultats, utilisez votre projecteur dans une pièce sombre.
2. Placez le projecteur sur une surface plane et à niveau, dans un endroit sec à l'abri de la poussière et de l'humidité.
3. Ne placez pas votre projecteur en plein soleil, à côté d'appareils de chauffage ou d'appareils dégagant de la chaleur.
4. L'exposition en plein soleil, la fumée ou la vapeur peuvent endommager des composants internes.
5. Manipulez votre projecteur avec précaution. Une chute ou un choc peuvent endommager des composants internes.
6. Ne placez pas d'objets lourds sur le projecteur.
7. **Si vous voulez installer le projecteur au plafond:**
  - a. N'essayez pas d'installer le projecteur vous-même.
  - b. Le projecteur doit être installé par un technicien qualifié pour garantir une installation réussie et réduire le risque d'éventuelles blessures corporelles.
  - c. De plus le plafond doit être suffisamment solide pour supporter le projecteur et l'installation doit être conforme aux réglementations locales de construction.
  - d. Veuillez consulter votre revendeur pour de plus amples informations.

## Alimentation

1. Ce projecteur est conçu pour fonctionner avec une alimentation électrique de 100-120 ou 200-240 V 50/60 Hz. Assurez-vous que votre alimentation correspond à ces critères avant d'essayer d'utiliser votre projecteur.
2. Manipulez le câble d'alimentation avec précaution et évitez de l'entortiller. Tout câble endommagé peut provoquer une décharge électrique ou un incendie.
3. Si le projecteur ne doit pas être utilisé pendant longtemps, débranchez la prise de la source d'alimentation.

## Nettoyage

1. Débranchez le projecteur avant de procéder au nettoyage.
2. Nettoyez régulièrement le coffret avec un chiffon humide. Si celui-ci est très sale, utilisez un détergent doux. N'utilisez jamais de détergents puissants, de l'alcool ou d'autres solvants.
3. Utilisez un ventilateur ou un papier à objectif pour nettoyer l'objectif et faites attention de ne pas rayer ou d'abîmer l'objectif.

### Information importante

Ne pas débrancher le câble d'alimentation de la prise du secteur dans les circonstances suivantes car cela risque d'endommager le projecteur:

- \* Lorsque le message "Veuillez patienter un instant" apparaît. Ce message sera affiché après que le projecteur soit éteint.
- \* Immédiatement après que le cordon d'alimentation électrique ait été branché sur la prise du mur (l'indicateur POWER n'est pas encore devenu orange).
- \* Immédiatement après que le ventilateur de refroidissement de soit arrêté de fonctionner (le ventilateur de refroidissement continue à fonctionner pendant trois minutes après l'extinction du projecteur grâce à l'interrupteur POWER OFF).
- \* Lorsque les indicateurs POWER (alimentation électrique) et STATUS (état) clignotent alternativement.

### ATTENTION

- Ne pas placer le projecteur sur le côté lorsque la lampe est allumée, sinon le projecteur risque d'être endommagé.
- Avant d'expédier ce projecteur, veuillez démonter l'objectif et fixer le bouchon d'objectif.  
Le mécanisme de déplacement de l'objectif pourrait être endommagé durant le transport à la suite d'une manipulation maladroite.

## Remplacement de la lampe

- Effectuez le remplacement de la lampe en fonction des instructions de la page E-54.
- Assurez-vous de remplacer la lampe lorsque le message "**La lampe a atteint sa durée de vie maximum, prière de la remplacer.**" apparaît. Si vous continuez à l'utiliser au-delà de sa durée de vie, celle-ci risque d'exploser et de répandre des fragments de verre à l'intérieur du boîtier.  
Ne les touchez pas car elles peuvent vous blesser. Dans ce cas, contactez votre revendeur NEC afin de procéder au remplacement de la lampe.
- Attendez au minimum trois minutes après avoir éteint la lampe avant de la rallumer.  
Une haute tension est immédiatement appliquée à la lampe quand celle-ci est mise sous tension.  
Par conséquent, éteindre, puis tout de suite rallumer peut réduire la durée de vie de votre lampe et endommager votre projecteur.

## Précautions contre les risques d'incendie et de décharge électrique

1. Assurez-vous que la ventilation est suffisante et que les trous d'aération ne sont pas obstrués afin d'éviter tout échauffement à l'intérieur de votre projecteur. Laissez au moins 3 pouces (10 cm) d'espace entre le projecteur et le mur.
2. Évitez de faire tomber dans le projecteur des objets étrangers comme des trombones ou des morceaux de papier. N'essayez pas de récupérer tout objet tombé à l'intérieur de votre projecteur. N'insérez pas d'objets métalliques comme du fil de fer ou un tournevis dans votre projecteur. Si quelque chose est tombée à l'intérieur de votre projecteur, débranchez-le immédiatement et faites retirer l'objet par une personne qualifiée de la maintenance NEC.
3. Ne placez aucun liquide sur votre projecteur.
4. Connexion d'un câble LAN une carte LAN:  
Pour des raisons de surtension, ne pas connecter un reau disposant d'une tension excessive.

## Avertissements

- Ne regardez pas à l'intérieur de l'objectif lorsque le projecteur est en marche. Vous risquez de vous blesser gravement aux yeux.
- Maintenez tout ce qui s'apparente à une loupe en dehors du faisceau lumineux du projecteur. La lumière projetée par l'objectif est très puissante, de sorte que tout objet en opposition pourrait dévier le faisceau provenant de l'objectif, ce qui pourrait avoir des conséquences imprévues telles qu'un incendie ou une lésion oculaire.
- Ne touchez pas l'objectif avec son couvercle fourni lorsque le projecteur est allumé. Faire cela pourrait faire fondre le couvercle et peut-être brûler vos mains à cause de la chaleur émise par le faisceau lumineux.

# LIMITED WARRANTY (USA and Canada only)

## NEC SOLUTIONS' PROJECTOR PRODUCTS

NEC Solutions (America), Inc. (hereafter NEC Solutions) warrants this product to be free from defects in material and workmanship under the following terms.

## HOW LONG IS THE WARRANTY

NEC Solutions' GT2150 projectors are covered by a two (2) year limited parts and labor warranty from the date of the first customer purchase. The lamp when used under normal operating conditions is warranted for 1000 hours or six months, whichever comes first.

## WHO IS PROTECTED

This warranty may be enforced only by the first purchaser, and is not transferable.

## WHAT IS COVERED AND WHAT IS NOT COVERED

Except as specified below, this warranty covers all defects in material or workmanship in this product.

NEC SOLUTIONS' LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT AT NEC SOLUTIONS' OPTION. REPLACEMENT PRODUCTS MAY BE NEW OR 'LIKE NEW'. The following are not covered by the limited warranty and NEC Solutions shall not be liable for:

1. Any product which is not distributed in the U.S.A. or Canada by NEC Solutions or which is not purchased, installed, and operated in the U.S.A or Canada.
2. Any product on which the serial number has been defaced, modified or removed.
3. Normal decrease in lamp light output over time.
4. Damage, deterioration or malfunction resulting from:
  - a. Accident, misuse, abuse, neglect, improper ventilation, fire, dust, smoke, water, lightning or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - b. Repair or attempted repair by anyone other than a NEC Solutions authorized service center.
  - c. Any shipment of the product (claims must be presented to the carrier).
  - d. Removal or installation of the product.
  - e. Any other cause which does not relate to a product defect.
  - f. Use of the product beyond normal operating conditions. Normal operating conditions are defined as product use not in excess of 5 hours per day and 260 days per year.
5. Cartons, carrying cases, shipping cases, batteries, external cabinets, magnetic tapes, or any accessories used in connection with the product.
6. Service required as a result of third party components.

## WHAT NEC SOLUTIONS WILL PAY FOR

NEC Solutions will pay labor and material expenses for covered items, but NEC Solutions will not pay for the following:

1. Removal or installation charges.
2. Costs of technical adjustments, set-up, maintenance, or adjustment of user controls.
3. Payment of shipping and related charges incurred in returning the product for warranty repair.

## HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on your product, consult the dealer from whom you purchased the product.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage. In order to obtain warranty service, you may be required to describe and demonstrate the problem to your dealer or to NEC Solutions.
3. All products returned to NEC Solutions for service MUST have prior approval. To receive approval or for the name of the nearest NEC Solutions authorized service center, call NEC Solutions at 800-836-0655.
4. It shall be your obligation and expense to ship the product, freight prepaid, or to deliver it to a NEC Solutions authorized service center, in either the original package or a similar package affording an equal degree of protection.
5. In the event a product is returned to NEC Solutions for warranty service, and it is determined that there is no product defect or that the product condition is not covered by this limited warranty, a diagnostic service fee may be charged to the customer.

## LIMITATION OF IMPLIED WARRANTIES

EXCEPT AS EXPRESSLY SET FORTH IN THIS LIMITED WARRANTY, NEC SOLUTIONS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED TO THE TERMS AND DURATION OF THIS LIMITED WARRANTY.

## EXCLUSION OF DAMAGES

NEC SOLUTIONS' LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT AT NEC SOLUTIONS' OPTION. NEC SOLUTIONS SHALL NOT BE LIABLE FOR:

1. DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THIS PRODUCT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, COMMERCIAL LOSS; OR
2. ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.

## HOW STATE LAW RELATES TO THE WARRANTY

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

## FOR MORE INFORMATION, CONTACT:

NEC SOLUTIONS (AMERICA), INC.  
1250 N. Arlington Heights Road, Suite 500  
Itasca, Illinois 60143-1248  
TELEPHONE 800-836-0655  
[www.necvisualsystems.com](http://www.necvisualsystems.com)

Customers are cautioned that product performance is affected by system configuration, software, the application, customer data, and operator control, among other factors. While NEC Solutions' products are considered to be compatible with many systems, the specific functional implementation by the customers of the product may vary. Therefore, the suitability of a product for a specific purpose or application must be determined by the customer and is not warranted by NEC Solutions.



---

---

## DECLARATION OF CONFORMITY

---

---

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

<b>U.S. Responsible Party:</b>	<b>NEC Technologies, Inc.</b>
<b>Address:</b>	<b>1250 N. Arlington Heights Road Itasca, Illinois 60143</b>
<b>Tel. No.:</b>	<b>(630) 467-5000</b>

Type of Product: LCD Projector  
Equipment Classification: Class B Peripheral  
Models: GT2150

*We hereby declare that the equipment specified above  
conforms to the technical standards as specified in the FCC Rules.*



# TABLE OF CONTENTS

## 1 INTRODUCTION

What's in the Box?	E-1
Getting to Know Your G2150 Projector	E-2
Attaching the lens hood cap to the lens hood with the supplied string and rivet	E-4
Carrying the Projector	E-4
Top Features	E-5
Front Terminal Panel (Right)	E-6
Front Terminal Panel (Left)	E-7
Remote Control Features	E-8
Remote Control Precautions	E-10
Remote Control Battery Installation	E-10
Operating Range for Wireless Remote Control	E-10
Using the Remote Control in Wired Operation	E-11

## 2 INSTALLATION

Setting Up Your GT2150 Projector	E-12
Screen Size and Projection Distance	E-12
Lens Shift Adjustable Range	E-13
Optional Lens Installation	E-14
Setting up for Double Stacking in Link Mode	E-16
Projector Orientation	E-17

## 3 Basic Operation

Connecting the Power Cable and Turn on the Projector	E-19
About Startup Screen	E-20
Set up the projector	E-21
Other adjustments	E-22

## 4 CONNECTIONS

When used in standalone operation	E-23
Connecting Your VCR Or Laser Disc Player	E-23
Connecting Your DVD Player with Component Output	E-24
Connecting Your PC Or Macintosh Computer	E-25
Connecting a PC with DVI output	E-26
Using OUTPUT Connectors	E-26
Connecting to a Single Workstation	E-27
Ferrite clamp core Installation	E-27
When Used with One Switcher (ISS-6020/ISS-6020G)	E-28
When Used with Two or More Switchers (100 Inputs)	E-29
How to make connections	E-29
Set the DIP switch (S8601) of the Switcher as follows	E-30
REMOTE 1 Connector	E-31
Operating Multiple Projector with Remote Control	E-33
Using the PC CONTROL connectors	E-34

## 5 OPERATION

General Controls	E-35
Using the Menus	E-35
Customizing Basic/Custom Menu	E-36
List of Direct Button Combinations	E-37
Menu Tree	E-38
Menu Elements	E-40
Menu Descriptions & Functions	E-41
Source Select	E-41
Switcher	E-41
Entry List	E-41
Entry Edit Command	E-41
Selecting a new signal that is close to one of the listed signals in horizontal and vertical frequency	E-42
Adjust (Source)	E-42
Picture	E-42
Brightness	E-42
Contrast	E-42
Saturation	E-42
Color	E-42
Hue	E-42
Sharpness	E-42
V-Aperture	E-42
Gamma Correction	E-42
White Balance	E-43
Color Temperature	E-43
Brightness R/G/B	E-43
Contrast R/G/B	E-43
Signal Level	E-43
Image	E-43
Pixel Adjust	E-43
Clock/Phase	E-43
Horizontal/Vertical Position	E-43
Aspect Ratio	E-43
Resolution	E-43
Overscan	E-43
Video Filter	E-44
Blanking	E-44

Video Adj	E-44
Noise Reduction	E-44
Color Matrix	E-44
Y/C Delay	E-44
Telecine	E-44
Motion Select	E-44
Motion Level	E-44
YTR Adjustment	E-44
CTR Adjustment	E-44
Option Adj	E-45
Clamp Timing	E-45
Sync Protection	E-45
VD Delay	E-45
Signal Type	E-45
Switcher	E-45
Switcher Gain	E-45
Switcher Volume	E-45
Volume	E-45
Ref Adj	E-45
Keystone	E-45
Lamp Mode	E-46
Reference White Balance	E-46
Factory Default	E-46
Projector Options	E-46
Timer	E-46
On/Off Timer	E-46
Sleep Timer	E-47
Menu	E-47
Page 1:	E-47
Menu Mode/Language/Menu Display Time	E-48
Page 2:	E-48
Display Select/Date Format/Date, Time Preset	E-48
Page 3:	E-48
Message(No Input/Clean Filter)	E-48
Direct Button(Volume Bar/Keystone Bar)	E-48
Setup	E-48
Page 1:	E-48
Orientation/Background/S-Video Mode Select, Remote Sensor	E-49
Page 2:	E-49
Signal Select(RGB1/2) /Sync Termination(RGB1)	E-49
Page 3:	E-49
Signal Select (Video 1/2 and S-Video) / Signal Select (RGB Connector)	E-49
Page 4:	E-50
Auto Adjust (RGB Only)/ Power Management/ Power Off Confirmation/Keystone Save/ Built-in Speaker/Lamp Off Mode/ Last Memory/User Name	E-50
Page 5:	E-50
Communication Speed/Projector ID / Default Source Select	E-50
Page 6:	E-50
Clear Lamp Hour Meter/Clear Filter Usage	E-50
Link Mode	E-51
Switcher Control	E-51
Help	E-51
Contents	E-51
Source Information	E-51
Projector Information	E-51
Link Mode	E-51
Test Pattern	E-51

## 6 MAINTENANCE

Replacing the Lamp	E-52
Cleaning or Replacing the Filter	E-53
Remplacement de la lampe	E-54
Nettoyage ou remplacement du filtre	E-55

## 7 TROUBLESHOOTING

Power / Status Light Messages	E-56
Lamp Light Messages	E-56
Common Problems & Solutions	E-56

## 8 SPECIFICATIONS

Optical/Electrical	E-57
Mechanical	E-58

## 9 Appendix

Cabinet Dimensions	E-59
Optional Accessories	E-59
D-Sub Pin Assignments	E-60
Compatible Input Signal List	E-61
List of Menu Items Available on Link Mode	E-62
PC Control Codes	E-63
Cable Connection	E-63
Gravity Stack	E-63

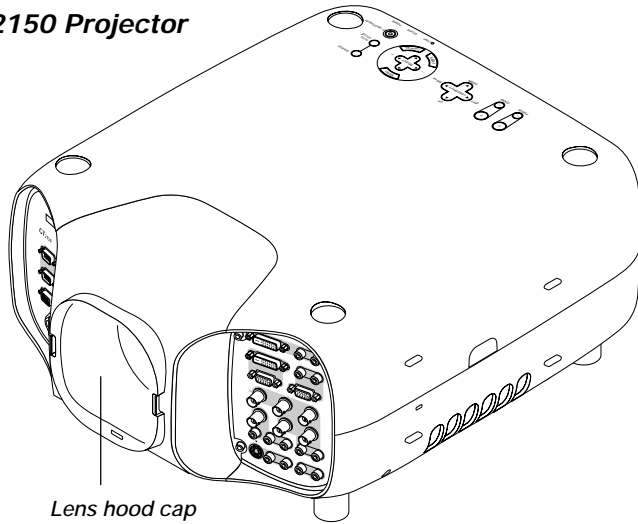
# 1. INTRODUCTION

## What's in the Box?

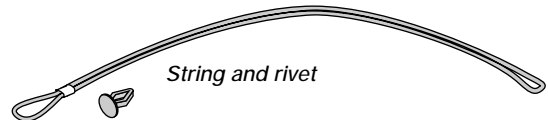
Make sure your box contains everything listed. If any pieces are missing, contact your dealer. Please save the original box and packing materials if you ever need to ship your GT2150 Projector.

*NOTE: Lenses are optional. Order lenses from your NEC dealer.*

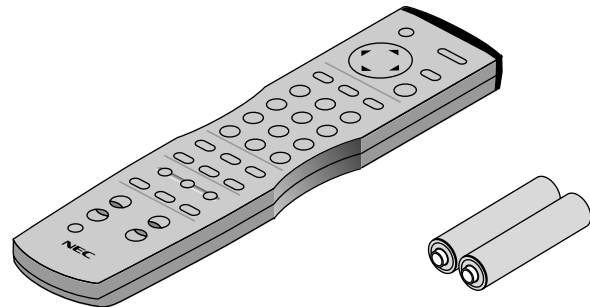
### GT2150 Projector



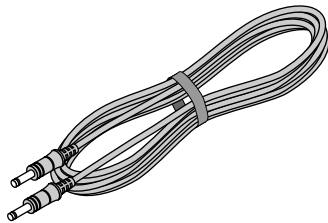
Lens hood cap



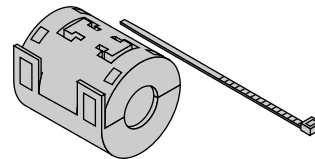
String and rivet



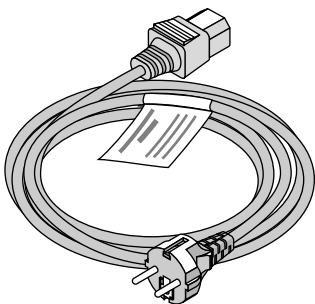
Remote control and batteries (AAA x 2)



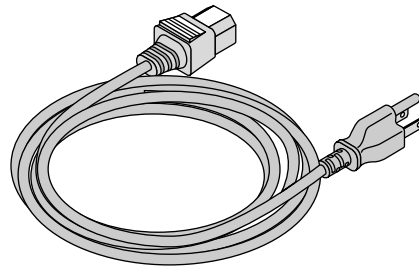
Remote cable



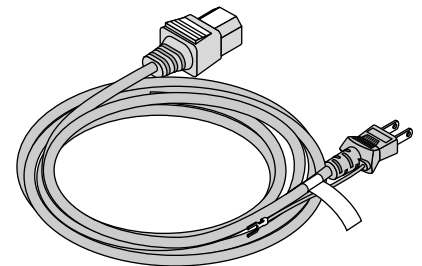
Ferrite clamp cores for a commercially available BNC cable and DVI cable (x 2)  
(For RGB1 connector and DVI DIGITAL Input connector. See page E-27 for installation instructions.)



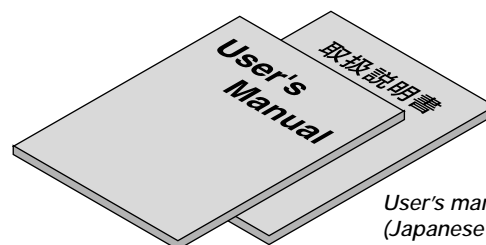
Power cable for Europe (AC 220-240V)



Power cable for North America (AC 120V)



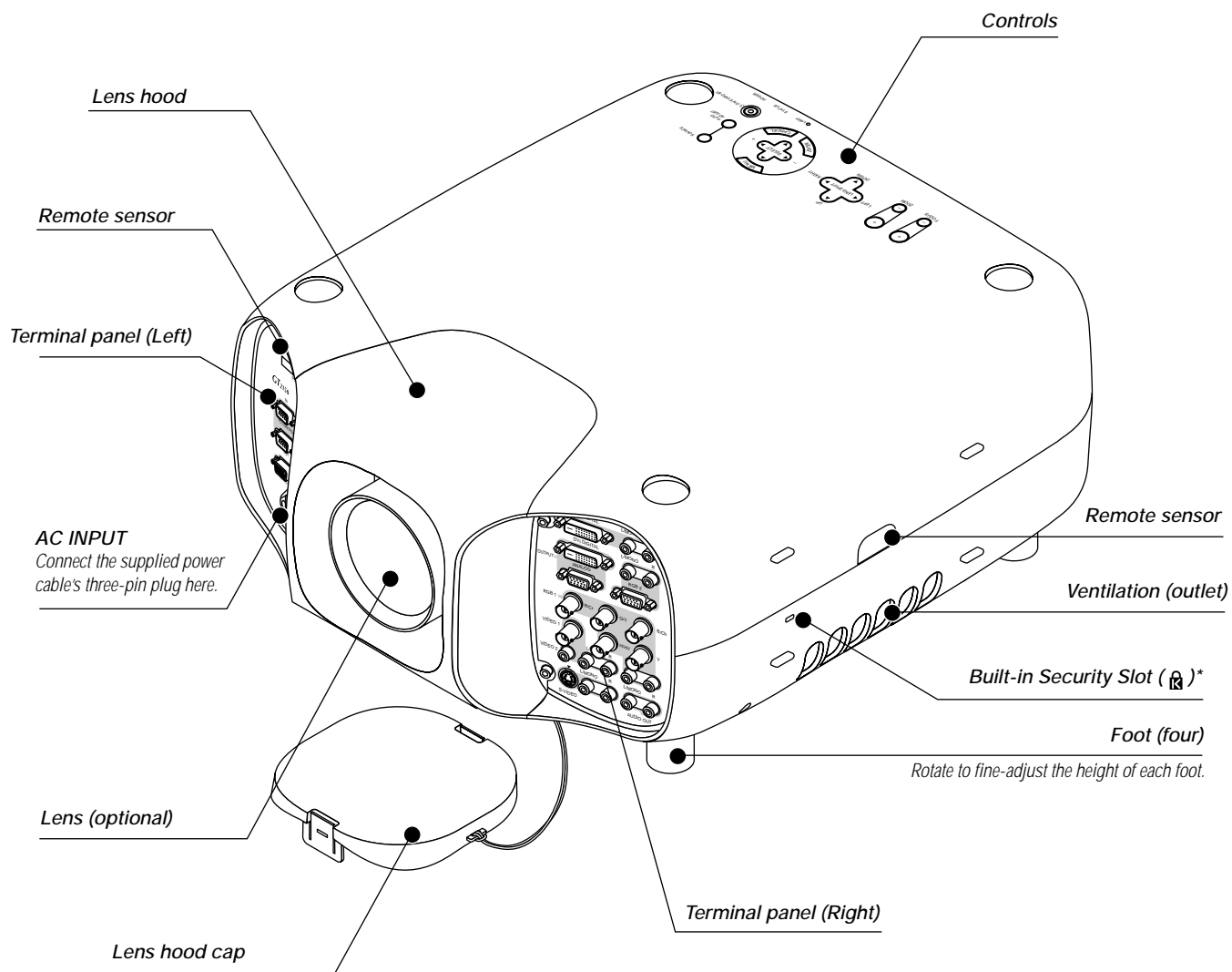
Power cable for Japan (AC 100V)



User's manuals  
(Japanese and English/German)

---

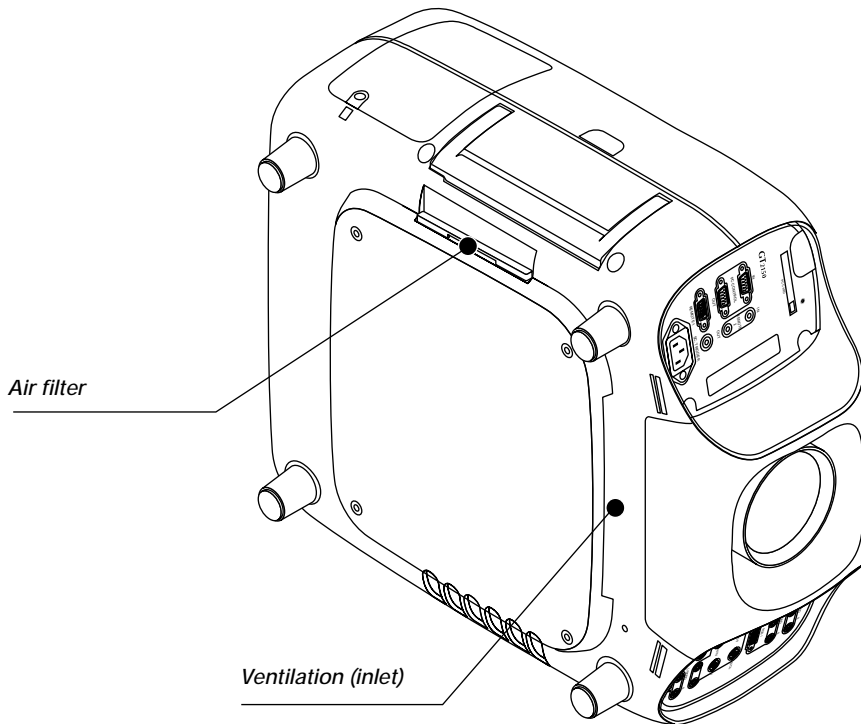
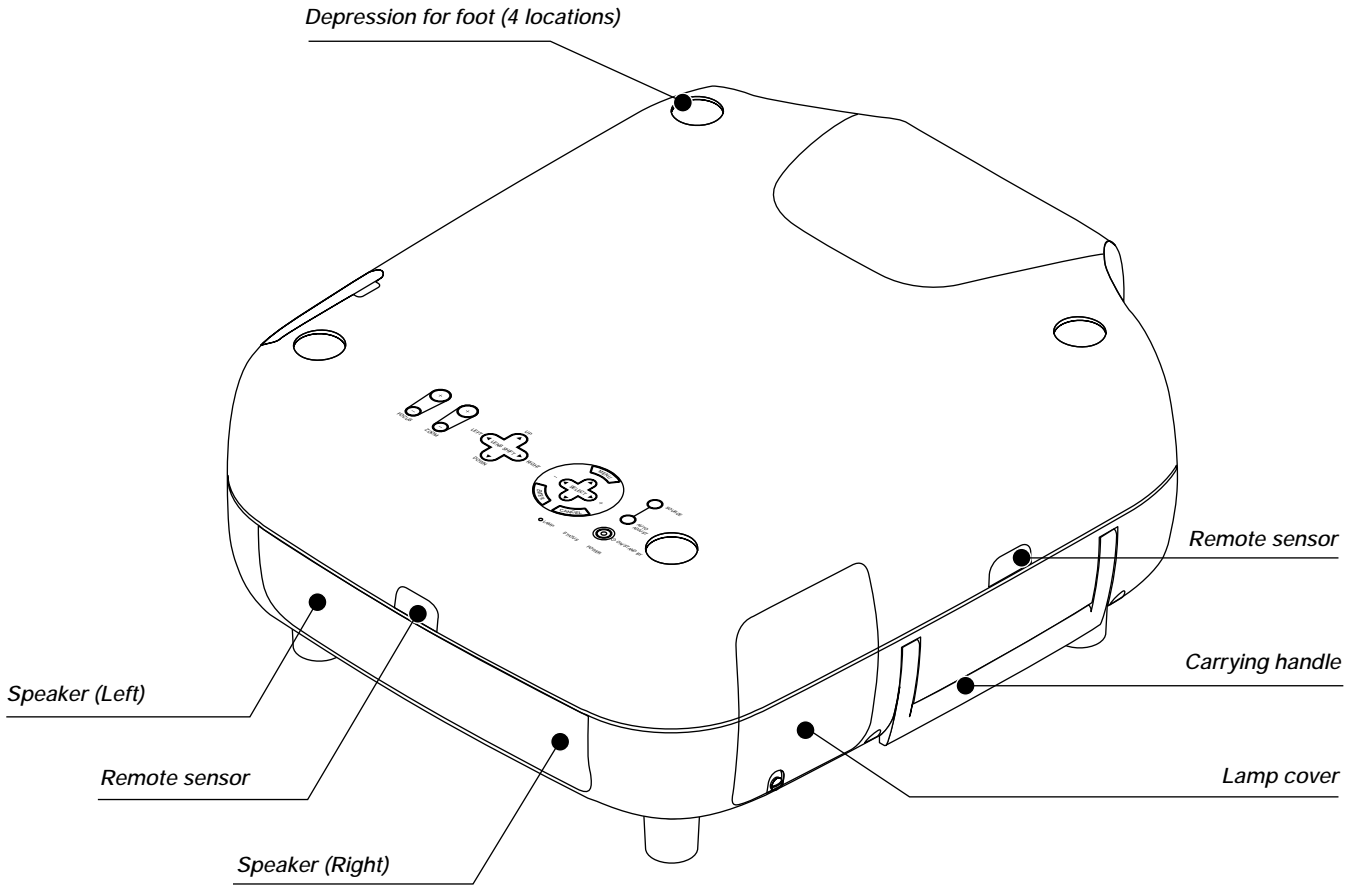
## Getting to Know Your GT2150 Projector



---

**\*NOTE:** Slot for Kensington MicroSaver Security System  
This security slot supports the MicroSaver® Security System.  
MicroSaver® is a registered trademark of Kensington Microware Inc. The logo  
is trademarked and owned by Kensington Microware Inc.

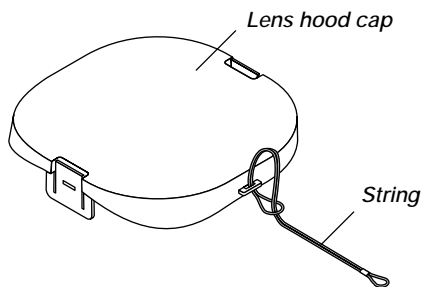
---



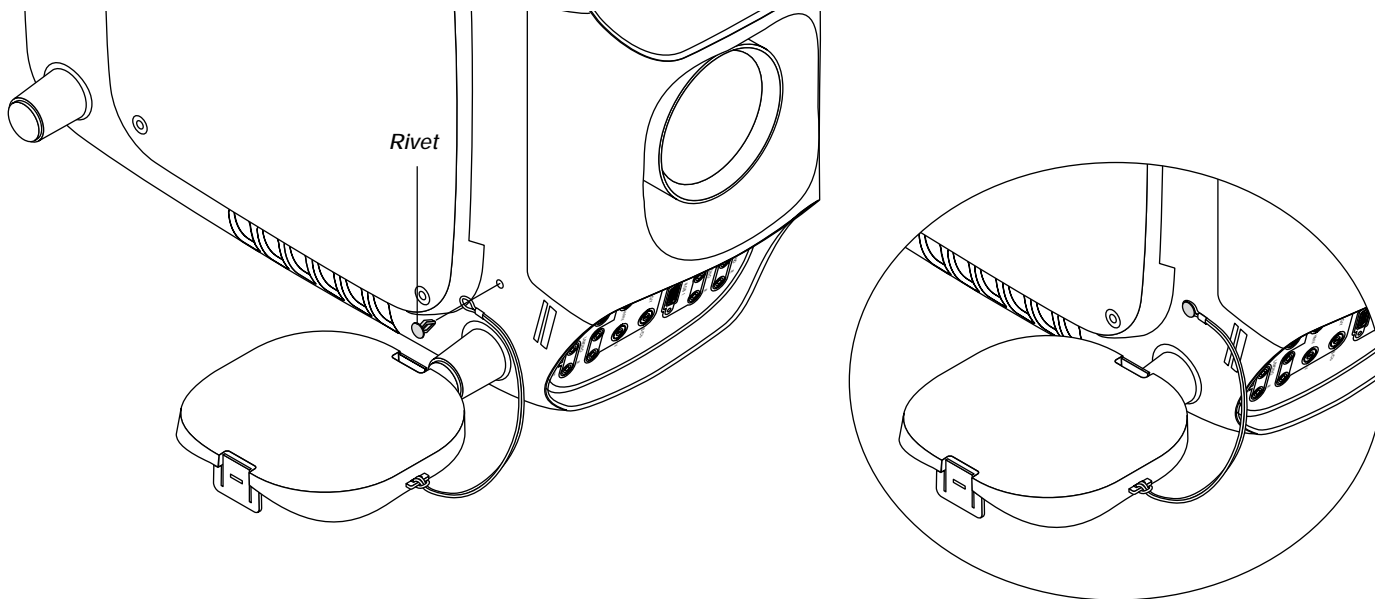
---

## Attaching the lens hood cap to the lens hood with the supplied string and rivet

1. Thread the string through the hole on the lens hood cap.



2. Use the rivet to attach the string to the bottom of the projector.



## Carrying the Projector

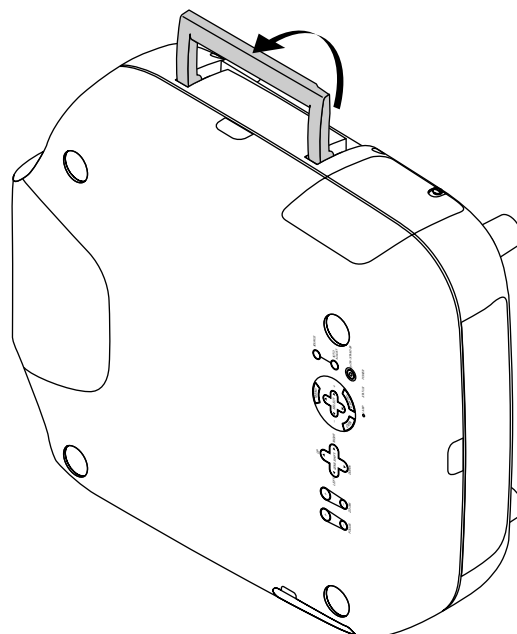
Always carry your projector by the handle.  
Ensure that the power cable and any other cables connecting to video sources are disconnected before moving the projector.  
When moving the projector or when it is not in use, cover the lens with the lens hood cap.

---

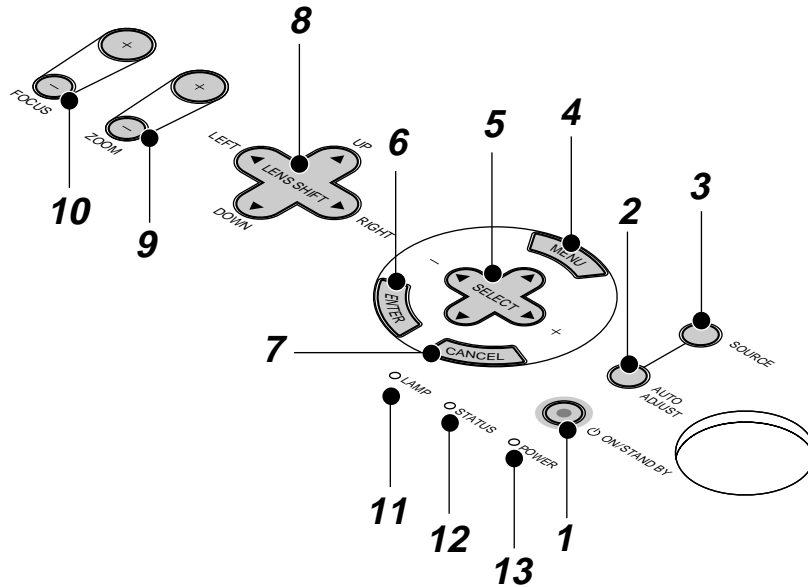
### CAUTION:

*Do not put the projector on its side when the lamp is on.  
Doing so may cause damage to the projector.*

---



## Top Features



### 1. Power Button (ON / STAND BY) (⏻)

Use this button to turn the power on and off when the power is supplied and the projector is in standby mode.

**NOTE:** To turn off the projector, press and hold this button for a minimum of two seconds.

### 2. Auto Adjust Button (RGB only)

Use this button to adjust Position-H/V and Pixel Clock for an optimal picture. Some signals may not be displayed correctly or take time to switch between sources.

### 3. Source Button

Use this button to select a video source such as a PC, VCR or DVD player.

Each time this button is pressed, the input source will change as follows:

RGB1 → RGB2 → DVI (DIGITAL) → Video1 → Video2 → S-Video

If no input signal is present, the input will be skipped.

### 4. Menu Button

Displays the menu.

### 5. Select ▲▼◀▶ / Volume (+) (-) Buttons

▲▼: Use these buttons to select the menu of the item you wish to adjust.

When no menus appear, these buttons work as a volume control.

◀▶: Use these buttons to change the level of a selected menu item. A press of the ▶ button executes the selection.

### 6. Enter Button

Executes your menu selection and activates items selected from the menu.

### 7. Cancel Button

Press this button to exit "Menus". Press this button to return the adjustments to the last condition while you are in the adjustment or setting menu.

### 8 Lens Shift Button

Adjust the lens offset by shifting the projected image position horizontally and / or vertically.

### 9 Zoom Button

Zoom the lens in and out.

### 10 Focus Button

Adjust the lens focus.

### 11. Lamp Remaining Indicator

Indicates the lamp remaining amount. See the Lamp Light Messages on page E-56 for more details.

### 12. Status Indicator

When this is lit red (orange in Eco mode) continually, it's warning you that the projection lamp has reached the end of its usable life (1500 hours in Normal mode and up to 2000 hours in Eco mode). After this light appears, it is advisable to replace the projection lamp as soon as possible. (See page E-52). In addition the message "The lamp has reached the end of its usable life. Please replace the lamp." appears continually until the lamp is replaced.

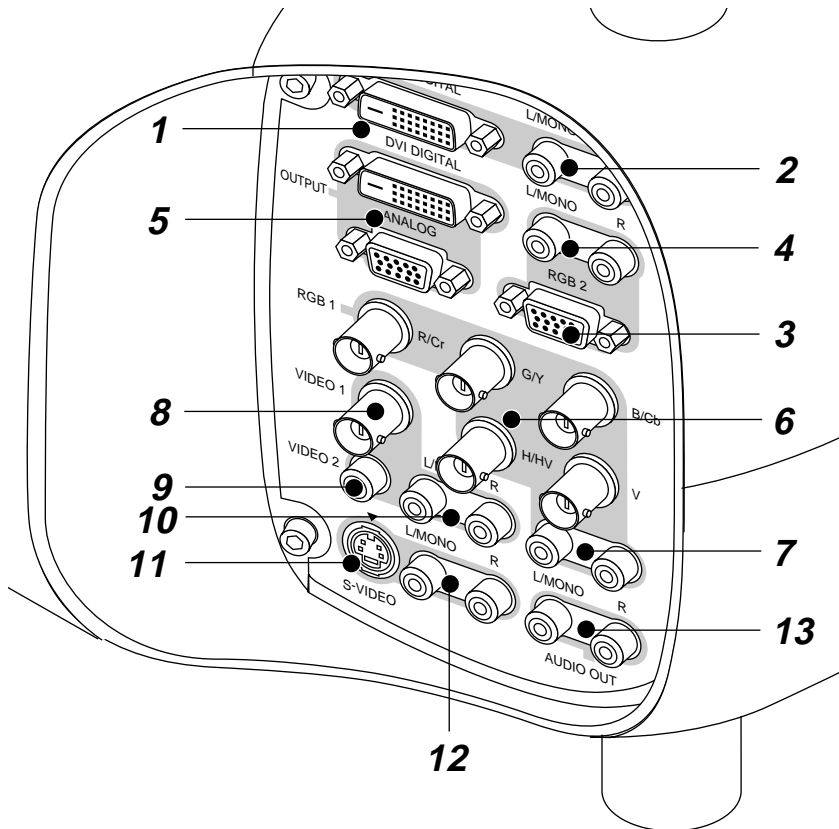
If the projector is in Eco mode or something out of the ordinary takes place, this indicator is lit or blinks. For example, If this light blinks red rapidly, it indicates that the lamp cover is not attached properly or the projector is overheated.

See the Power / Status Light Messages on page E-56 for more details.

### 13. Power Indicator

When this indicator is green, the projector is on; when the indicator is orange, it is in standby mode.

## Front Terminal Panel (Right)



### 1. DVI DIGITAL Input Connector (DVI-D)

This connector can be used to accept digital signal output from a computer with a DVI connector.

### 2. DVI DIGITAL Audio Input Jacks (RCA)

These are the left channel and the right audio inputs for stereo sound coming from the equipment connected to a computer with DVI output.  
**L/MONO**

This is your left channel audio input for stereo sound from the equipment connected to a computer with DVI output.  
The L/MONO jack also serves as your monaural audio input.

**R**

This is your right channel audio input for stereo sound from the equipment connected to a computer with DVI output.

### 3. RGB 2 Connector (Mini D-Sub 15 pin)

Connect your PC, Macintosh, DVD player with Y/Cb/Cr outputs or other RGB equipment. The optional Component V. Cable is required for Y/Cb/Cr input connection.

**NOTE:** The RGB2 connector does not support the Switcher Control mode.

### 4. RGB 2 Audio Input Jacks (RCA)

**L/MONO**

This is your left channel audio input for stereo sound coming from the RGB Input 2 source.

This also serves as your monaural audio input.

**R**

This is your right channel audio input for stereo sound from the RGB Input 2 source.

### 5. DVI DIGITAL OUTPUT Connector (DVI-D)

This connector is used for double stacking.

Use a DVI-D cable (option) to connect the DIGITAL OUTPUT connector of a projector to the DVI DIGITAL input of the following projector until all the projectors are connected.

**ANALOG OUTPUT Connector (Mini D-Sub 15 pin)**  
You can use this connector to loop your computer image an external monitor from either the RGB 1 or RGB 2 input source.

### 6. RGB 1 Input Connectors (BNC)

Connect R,G,B,H (Horizontal sync) and V (Vertical sync) outputs of external equipment such as the NEC ISS-6020 Switcher.

If using a component with a combined sync (SYNC) output, connect it to the H/V terminal. When using luminance and color-difference signals of HDTV and DVD, connect Pr/Cr to the R, Y to the G and Pb/Cb to the B input of the projector.

### 7. RGB 1 Audio Input Jacks (RCA)

**L/MONO**

This is your left channel audio input for stereo sound coming from the RGB Input 1 source.

This also serves as your monaural audio input.

**R**

This is your right channel audio input for stereo sound from the RGB Input 1 source.

### 8. VIDEO 1 Input Connector (BNC)

Connect a VCR, DVD player, laser disc player, or document camera here to project video.

### 9. VIDEO 2 Input Connector (RCA)

Connect a VCR, DVD player, laser disc player, or document camera here to project video.

### 10. VIDEO Audio Input Jacks (RCA)

**L/MONO**

This is your left channel audio input for stereo sound coming from the VIDEO 1 or VIDEO 2 source.

This also serves as your monaural audio input.

**R**

This is your right channel audio input for stereo sound from the VIDEO 1 or VIDEO 2 source.

### 11. S-VIDEO Input Connector (DIN 4 pin)

Here is where you connect the S-Video input from an external source such as a VCR or laser disc player.

**NOTE:** S-Video provides more vivid color and higher resolution than the traditional composite video format.

### 12. S-VIDEO Audio Input Jacks (RCA)

**L/MONO**

This is your left channel audio input for stereo sound coming from the S-VIDEO source.

This also serves as your monaural audio input.

**R**

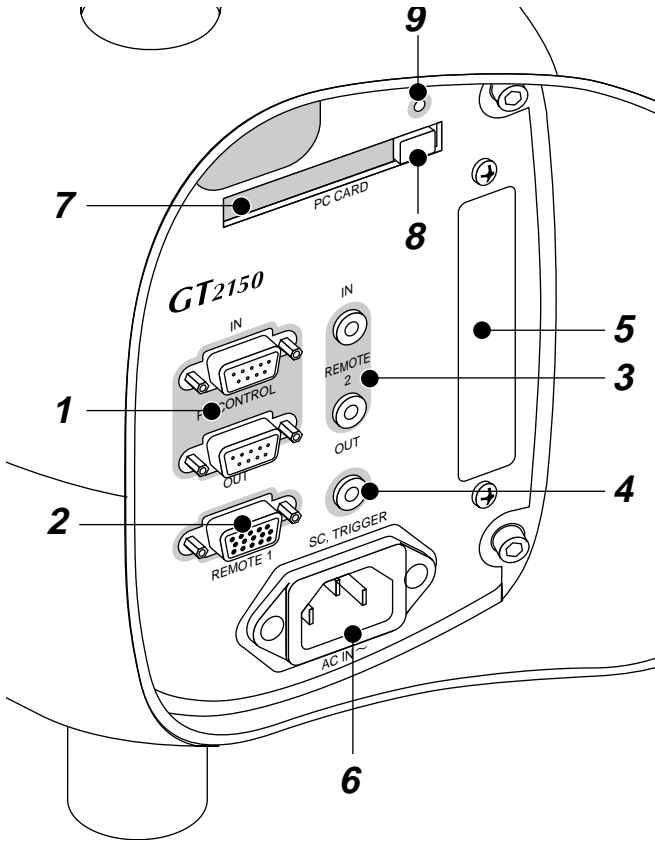
This is your right channel audio input for stereo sound from the S-VIDEO source.

### 13. AUDIO OUT Jacks (RCA)

You can use this connector to output sound from the currently selected input source (RGB 1, RGB 2, DVI (DIGITAL), VIDEO 1, VIDEO 2 or S-VIDEO). Output sound level can be adjusted in accordance with the sound level of the internal speaker.



## Front Terminal Panel (Left)



### 1. PC CONTROL Connectors (Mini D-Sub 9 pin)

For system expansion such as PC-Control.

IN: connect to the external equipment such as PC.

OUT: for daisy-chaining multiple projectors and operating them with the same external equipment. To do so, connect to a second projector's IN terminal to relay the input at the IN terminal of the first projector until all the projectors are connected.

### 2. REMOTE 1 Connector (Mini D-Sub 15 pin)

This terminal allows external control of the projector from either the Switcher or from an external control. When the Switcher is used, connect to the REMOTE 1 terminal on the back of the Switcher.

**NOTE:** This projector is compatible with the ISS-6020 Switcher.

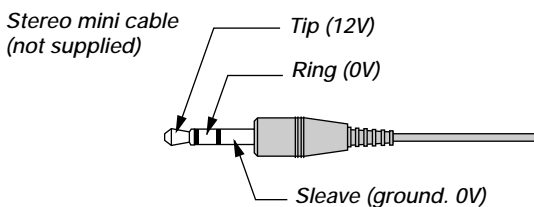
### 3. REMOTE 2 Mini Jacks

IN: wired remote control input.

OUT: for daisy-chaining multiple projectors and operating them with the same remote control. To do so, connect to a second projector's IN terminal to relay the input at the IN terminal of the first projector until all the projectors are connected.

### 4. SC. TRIGGER Mini Jack

Screen Trigger- When the GT2150 is powered ON the screen trigger output sends a low voltage trigger to the screen controller and the screen will go down.

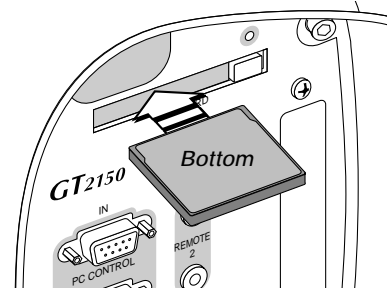


## Inserting or Ejecting a CompactFlash Card

**CAUTION:** DO NOT EJECT THE CompactFlash CARD, TURN OFF THE POWER, OR UNPLUG THE POWER CABLE of the projector while the PC card access indicator light shows that data is being accessed. Doing so could cause damage to the CompactFlash card.

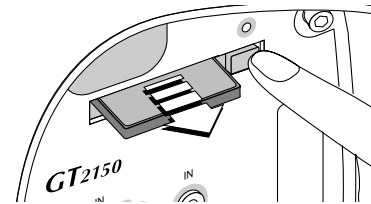
### Inserting

Insert the CompactFlash card into PC Card Slot with its TOP FACING DOWN.



### Removing

Press the PC Card Eject button. The CompactFlash card ejects partially, then remove.



When the GT2150 is powered OFF the screen trigger stops sending a low voltage trigger to the screen controller and the screen will go up.

**NOTE:** Screen Controllers are supplied and supported by screen manufactures. This option is not included with the GT2150 projector.

**NOTE:** Do not use this jack for anything other than intended use. Connecting the wired remote control to the SC. TRIGGER Mini Jack causes damage to the remote control.

### 5. Slot for LAN Board (Optional)

Use this connector to control the projector on a LAN. The optional LAN kit is required when this connector is used. See the instructions included with the optional LAN kit (GT50LAN).

### 6. AC IN

Connect the supplied power cable's three-pin plug here.

Three types of power cable are supplied with this LCD projector: three-pin type for U. S. A. and Canada. Two-pin type for Europe and Japan.

### 7. PC Card Slot

Insert a CompactFlash™ card here.

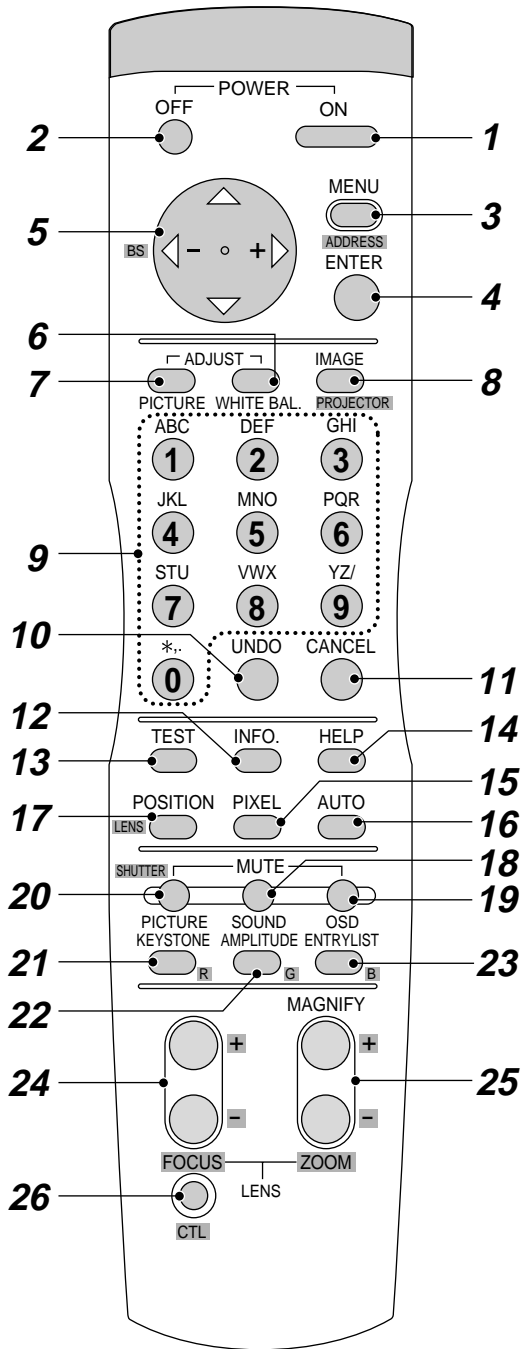
### 8. PC Card Eject Button

Press to eject a CompactFlash™ card.

### 9. PC Card Access Indicator

Lights while accessing a CompactFlash™ card.

# Remote Control Features



## 1. POWER ON

Press this button to turn on the projector when the power is supplied and the projector is in standby mode.

## 2. POWER OFF

Press and hold this button for a minimum of two seconds to turn off the projector.

## 3. MENU

Press to display the main menu.

While pressing and holding CTL, press this button to display the Remote Control ID dialog box to specify the remote control ID. See [page E-33](#).

## 4. ENTER

Executes the menu selection and activates items selected from the menu. When the slider or dialog box is displayed: Pressing this button confirms adjustments/setting and returns to the previous menu display.

## 5. Select (Up/Down/Left/Right)

▲▼: Use these buttons to select the menu of the item you wish to adjust.

When no menus appear, these buttons work as a volume control.

◀▶: Use these buttons to change the level of a selected menu item. A press of the ▶ button executes the selection.

Pressing and holding CTL, then pressing ◀ button works as a Back Space key in the entry screen.

Pressing and holding CTL, then pressing this button moves the menu, slider, toolbar or dialog box.

## 6. ADJUST WHITE BAL

Press to display the Color adjustment screen. Pressing this button sequentially selects "Color Temperature" → "White Balance - Brightness" → "White Balance - Contrast" → "Signal Level" → "Ref.White Bal" → "Switcher-Gain".

## 7. ADJUST PICTURE

Press to display the Picture adjustment screen. Pressing this button sequentially selects "Brightness" → "Contrast" → "Saturation" → "Color" → "Hue" → "Sharpness" → "V-Aperture" → "Gamma Correction".

## 8. IMAGE/PROJECTOR

Press to display the Image Option screen. Pressing this button sequentially selects "Pixel Adjust" → "Position" → "Aspect Ratio" → "Resolution" → "Overscan" → "Video Filter" → "Blanking".

While pressing and holding CTL, pressing this button rotates "On/Off Timer" → "Sleep Timer" → "Menu" → "Setup" → "Link Mode" → "Switcher Control" → "LAN mode"(optional).

## 9. Source / Input

Press to select input or to name a signal.

- 1 ..... Selects RGB 1 input.
- 2 ..... Selects RGB 2 input.
- 3 ..... Selects DVI (DIGITAL) input.
- 4 ..... Selects VIDEO 1 input.
- 5 ..... Selects VIDEO 2 input.
- 6 ..... Selects S-VIDEO input.
- 7 ..... Selects RGB1 (VIDEO) input
- 8 ..... Selects RGB1 (S-VIDEO) input

### 10. UNDO

Press to return the adjustments and settings to the previous condition. While pressing and holding CTL, pressing this button clears the entire menus or adjustment/setting screen. At this time the adjustments/settings are stored in memory except the items on the setting screen with "OK" and "Cancel" buttons such as the Menu and the Setup screen.

### 11. CANCEL

Press to exit the menu.

Press this button with CTL to return to the previous menu without closing adjustment/setting screen while the menus appear. This feature allows you to adjust or set several items concurrently.

### 12. INFO

Displays the "Source Information" or "Projector Information" window. This button toggles between these two windows.

### 13. TEST

Press to display the test pattern. Pressing this button sequentially selects six test patterns.

### 14. HELP

Provides online help.

### 15. PIXEL

Displays the Position/Clock screen to adjust the clock and phase.

### 16. AUTO (RGB only)

Press to adjust Position-H/V and Pixel Clock for an optimal picture.

### 17. POSITION

Press to display the Blanking screen; press again to display the Position screen.

While pressing and holding CTL, pressing this button displays the Lens Shift adjustment screen.

### 18. MUTE SOUND

Turns off the sound for a short period of time. Press again to restore the sound.

### 19. MUTE OSD

Press to turn off the on-screen display. Press again to restore the on-screen display.

**NOTE:** You can also turn off the on-screen display forcefully by pressing and holding CTL and then pressing MUTE OSD (Forced On-Screen Mute Mode) ; doing this again restores it. In this case any adjustment will still change the projector's memory settings. This mode is available even when input is switched to another or the power is turned off the main power.

### 20. MUTE PICTURE

Press to turn off the picture for a short period of time. Press again to restore the picture.

### 21. KEYSTONE (R)

Press to display the Keystone Correction screen.

When the test pattern is displayed, while pressing and holding CTL, pressing this button displays a red test pattern.

### 22. AMPLITUDE (G)

Service personnel only.

When the test pattern is displayed, while pressing and holding CTL, pressing this button displays a green test pattern.

### 23. ENTRY LIST (B)

Press to display the Entry List screen.

When the test pattern is displayed, while pressing and holding CTL, pressing this button displays a blue test pattern.

### 24. FOCUS (+/-)

While pressing and holding CTL, pressing this button allows you to adjust the lens focus.

### 25. MAGNIFY/ZOOM (+/-)

Magnify the size of a target portion.

While pressing and holding CTL, pressing this button allows you to zoom the lens in and out.

### 26. CTL

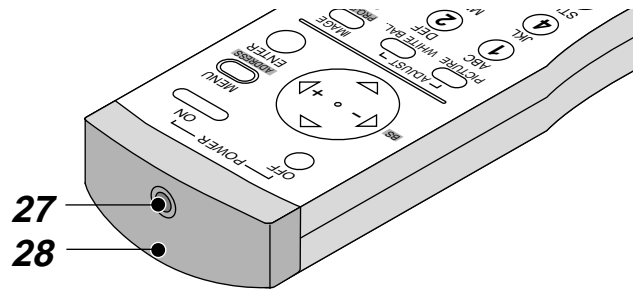
Used in conjunction with other buttons, similar to a shift key on a computer.

### 27. Remote Jack

Connect your remote control cable here for wired operation.

### 28. Infrared Transmitter

Direct the remote control toward the remote sensor on the projector cabinet.



## Remote Control Precautions

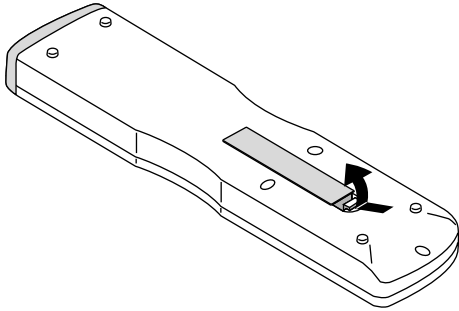
- The remote control system may not function when direct sunlight or strong illumination strikes the remote control sensor of the main unit, or when there is an obstacle in the path.
- When remote control buttons are pressed and held, projector's function keys may not operate.
- Do not subject to strong shock.
- Do not allow water or other liquid to splash on the remote control. If the remote control gets wet, wipe it dry immediately.
- Avoid exposure to heat and steam.
- Remove the batteries from the remote control when the remote control is not going to be used for a long period.

## Remote Control Battery Installation

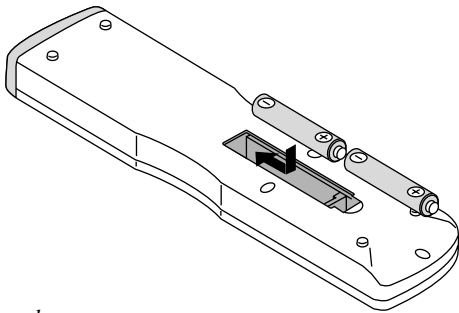
### Installing the Remote Control Batteries

When it comes time to replace the batteries, two "AAA" type will be required.

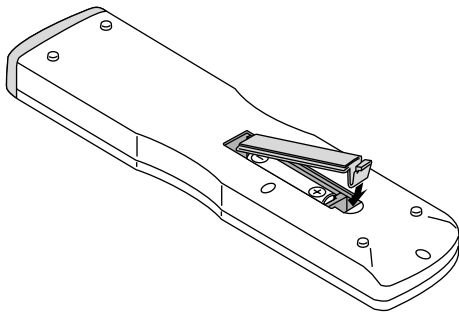
1. Press and open the cover.



2. Align and insert the batteries according to the (+) and (-) indications inside the case.



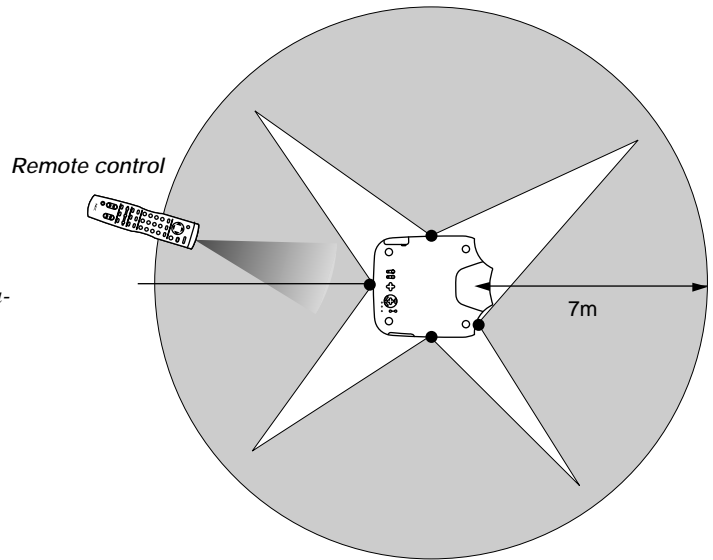
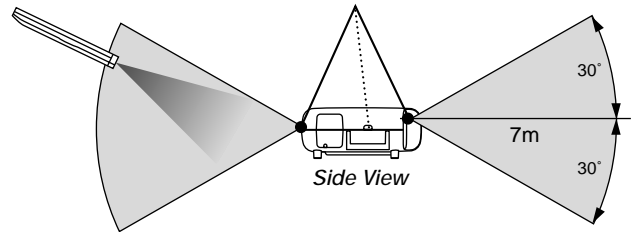
3. Replace the cover.



## Operating Range for Wireless Remote Control

The infrared signal operates by line-of-sight up to a distance of approximately 7m (20 feet) and a 60 degree angle of the remote sensor. The projector will not function if there are objects between the remote sensor and the remote control or if strong light falls on the remote sensor. Weak batteries will also prevent the projector from operating properly.

Remote sensors on the projector cabinet

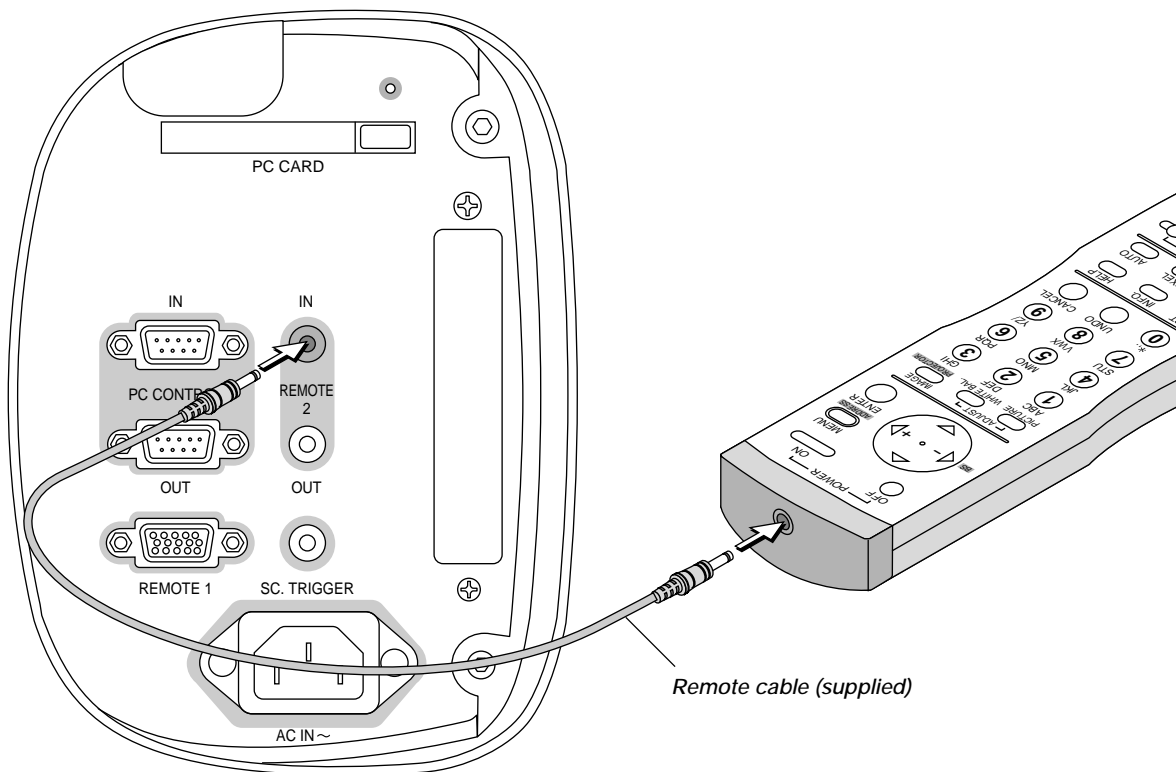


**NOTE:** You cannot operate the projector using the remote control if:

- The remote control ID is not set to [None].
- The remote ID is not the same as the projector ID.

See page E-33 for setting remote ID and page E-50 for setting projector ID.

Using the Remote Control in Wired Operation  
Connect one end of the supplied remote cable to the REMOTE 2 IN mini jack and the other end to the remote jack on the remote control.



Terminal panel (Left)

# 2. INSTALLATION

This section describes how to set up your GT2150 projector and how to connect video and audio sources.

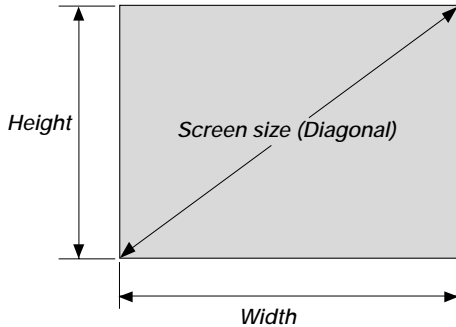
## Setting Up Your GT2150 Projector

Your GT2150 Projector is simple to set up and use. But before you get started, you must first:

1. Determine the image size
2. Set up a screen or select a non-glossy white wall onto which you can project your image.
3. Install the optional lens to the projector.
4. Connect the supplied power cable.
5. Set up the projector.
6. Connect a PC, VCR, DVD player, or other equipment.
7. Make settings or adjustments on the projector.

## Screen Size and Projection Distance

Applicable lens and throw distance/ List of screen sizes



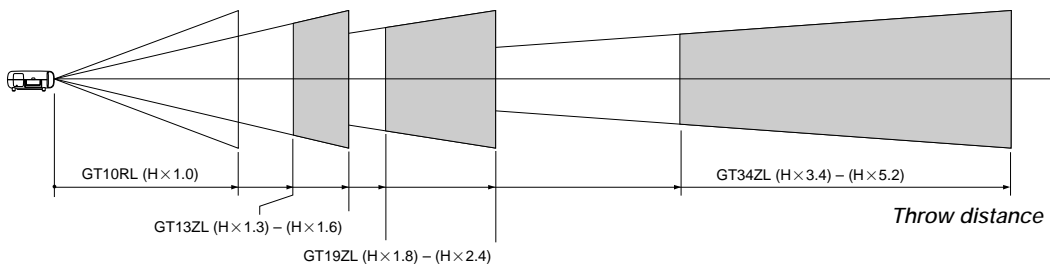
### List of Screen Sizes

Screen size	Width (H)		Height (V)	
	m	inch	m	inch
40"	0.8	31.5	0.6	23.6
60"	1.2	47.2	0.9	35.4
80"	1.6	63.0	1.2	47.2
100"	2.0	78.7	1.5	59.1
120"	2.4	94.5	1.8	70.9
150"	3.0	118.1	2.3	90.6
200"	4.1	161.4	3.0	118.1
250"	5.1	200.8	3.8	149.6
300"	6.1	240.2	4.6	181.1
400"	8.1	318.9	6.1	240.2
500"	10.2	401.6	7.6	299.2

Formulas: Screen width H (m)= Screen Diagonal (4:3) × 4/5 × 0.0254  
 Screen height V (m)= Screen Diagonal (4:3) × 3/5 × 0.0254  
 Screen width H (inch)= Screen size × 4/5  
 Screen height V (inch)= Screen size × 3/5

### Table of Throw Distances and Screen Sizes for Optional Lenses

LENS	Model	GT10RL		GT13ZL				GT19ZL				GT34ZL						
		Magnification		1.0		1.3 – 1.6				1.8 – 2.4				3.4 – 5.2				
		m	inch	m	inch	m	inch	m	inch	m	inch	m	inch	m	inch			
Screen Size (Diagonal)	40"	0.8	31.5	1.1	43.3	-	1.3	51.2	1.5	59.1	-	2.0	78.7	-	-	-	-	
	60"	1.2	47.2	1.6	63.0	-	2.0	78.7	2.2	86.6	-	2.9	114.2	-	-	-	-	
	67"	1.3	51.2	1.7	66.9	-	2.1	82.7	2.5	98.4	-	3.2	126.0	-	-	-	-	
	72"	1.4	55.1	1.9	74.8	-	2.3	90.6	2.6	102.4	-	3.5	137.8	-	-	-	-	
	80"	1.6	63.0	2.1	82.7	-	2.6	102.4	2.9	114.2	-	3.9	153.5	5.5	216.5	-	8.5	334.6
	84"	1.7	66.9	2.2	86.6	-	2.7	106.3	3.1	122.0	-	4.1	161.4	5.9	232.3	-	9.0	354.3
	90"	1.8	70.9	2.3	90.6	-	2.9	114.2	3.3	129.9	-	4.3	169.3	6.3	248.0	-	9.6	378.0
	100"	2.0	78.7	2.6	102.4	-	3.3	129.9	3.7	145.7	-	4.9	192.9	6.9	271.7	-	10.6	417.3
	120"	2.4	94.5	3.2	126.0	-	3.9	153.5	4.4	173.2	-	5.9	232.3	8.3	326.8	-	12.7	500.0
	150"	3.0	118.1	4.0	157.5	-	4.9	192.9	5.5	216.5	-	7.3	287.4	10.4	409.4	-	15.8	622.0
	180"	3.7	145.7	4.7	185.0	-	5.8	228.3	6.7	263.8	-	8.8	346.5	12.8	503.9	-	19.3	759.8
	200"	4.1	161.4	5.3	208.7	-	6.5	255.9	7.3	287.4	-	9.8	385.8	13.8	543.3	-	21.1	830.7
	210"	4.3	169.3	5.5	216.5	-	6.8	267.7	7.9	311.0	-	10.3	405.5	15.0	590.6	-	22.6	889.8
	240"	4.9	192.9	6.3	248.0	-	7.8	307.1	9.0	354.3	-	11.7	460.6	17.1	673.2	-	25.8	1015.7
	250"	5.1	200.8	6.6	259.8	-	8.1	318.9	9.1	358.3	-	12.2	480.3	17.3	681.1	-	26.4	1039.4
	270"	5.6	220.5	7.1	279.5	-	8.8	346.5	10.1	397.6	-	13.2	519.7	19.3	759.8	-	29.1	1145.7
	300"	6.1	240.2	7.9	311.0	-	9.8	385.8	11.0	433.1	-	14.6	574.8	20.7	815.0	-	31.7	1248.0
400"	-	-	-	-	-	-	-	-	-	-	-	-	27.6	1086.6	-	42.3	1665.4	
500"	-	-	-	-	-	-	-	-	-	-	-	-	34.5	1358.3	-	52.8	2078.7	



For screen sizes between 40" and 500" not indicated on the above table, use formulas below.

Projection Distance = Screen Width (H) × Lens Magnification

Throw distance for GT10RL lens (m/inch) = H × 1.0 (For H between 0.8 m / 31.5 inch and 6.1 m / 240.2 inch)

Throw distance for GT13ZL lens (m/inch) = H × 1.3 through H × 1.6 (For H between 1.1 m / 43.3 inch and 9.8 m / 385.8 inch)

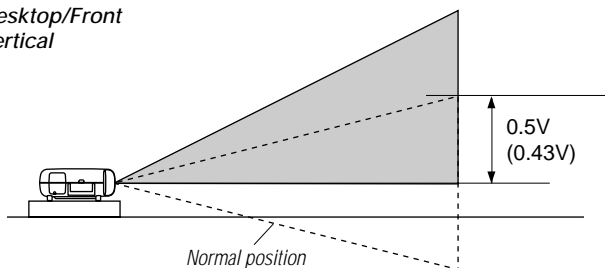
Throw distance for GT19ZL lens (m/inch) = H × 1.8 through H × 2.4 (For H between 1.5 m / 59 inch and 14.6 m / 574.8 inch)

Throw distance for GT34ZL lens (m/inch) = H × 3.4 through H × 5.2 (For H between 5.5 m / 216.5 inch and 52.8 m / 2078.7 inch)

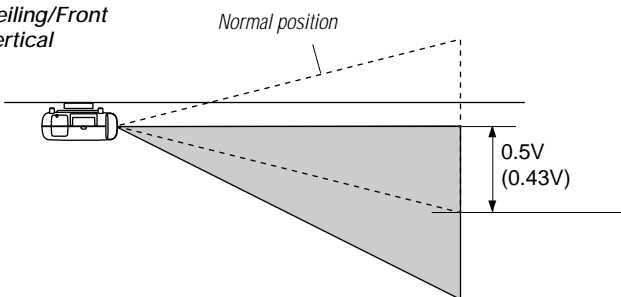
**NOTE:** Distances may vary +/-5%.

## Lens Shift Adjustable Range

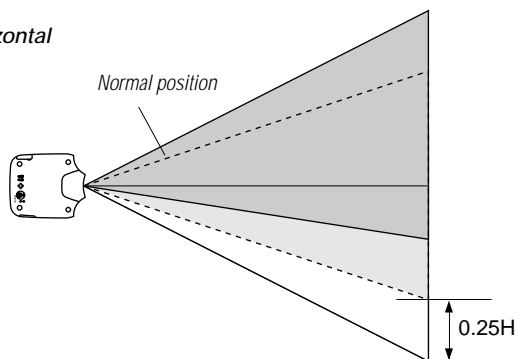
Desktop/Front Vertical



Ceiling/Front Vertical



Horizontal



Lens Shift Range for Desktop and Ceiling Mount Application  
The diagram below shows the location of the image position in the lens. The lens can be shifted within the shaded area as shown using the normal projection position as a starting point.

**NOTE:** Lens shift feature is not available on GT10RL (fixed lens).

### Maximum Possible Range for GT19ZL/GT34ZL (GT13ZL):

Up: 0.5 V (0.43V)

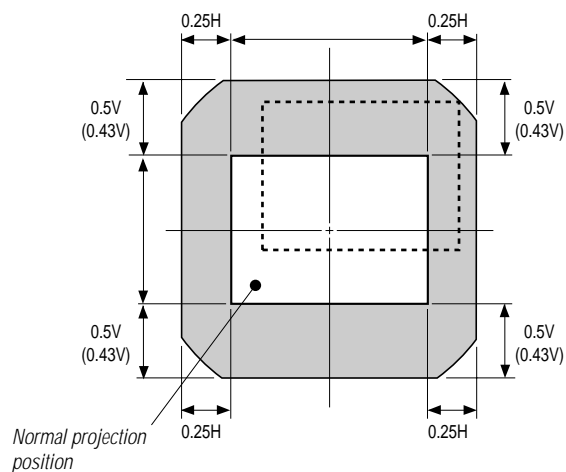
Down: 0.5 V (0.43V)

Right: 0.25 H

Left: 0.25 H

(H: width of projected image, V: height of projected image)

**NOTE:** If lens is shifted in two directions combined, maximum range in either direction cannot be obtained due to rounded off area near edge of lens. (example: shift up and right) See diagram below.



# Optional Lens Installation

This section describes how to install the lens.

## Before installation

- \* Determine the optional lens to be used to obtain a desired projection distance. There are four optional lenses available:  
GT10RL (Fixed short throw lens)  
GT19ZL, GT13ZL and GT34ZL (Zoom lens)
- \* Press the power button (ON/STAND BY) on the projector or POWER OFF button on the remote control, wait three minutes for the cooling fan to stop, then disconnect the power cable.  
Check that the projector has cooled off sufficiently before proceeding.

## CAUTION

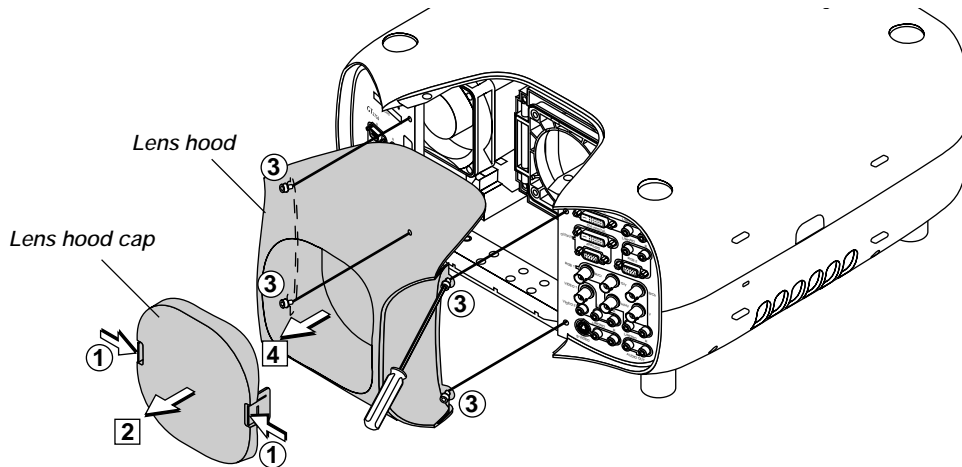
- \* The projector and lens contain high-precision parts. Do not induce shock to the projector or the lens.
- \* Do not touch the lens surface. Doing so can degrade the optical performance.

## Preparation: Tools needed for installation:

A hexagonal driver and dust-protective sheets are supplied with the optional lens.

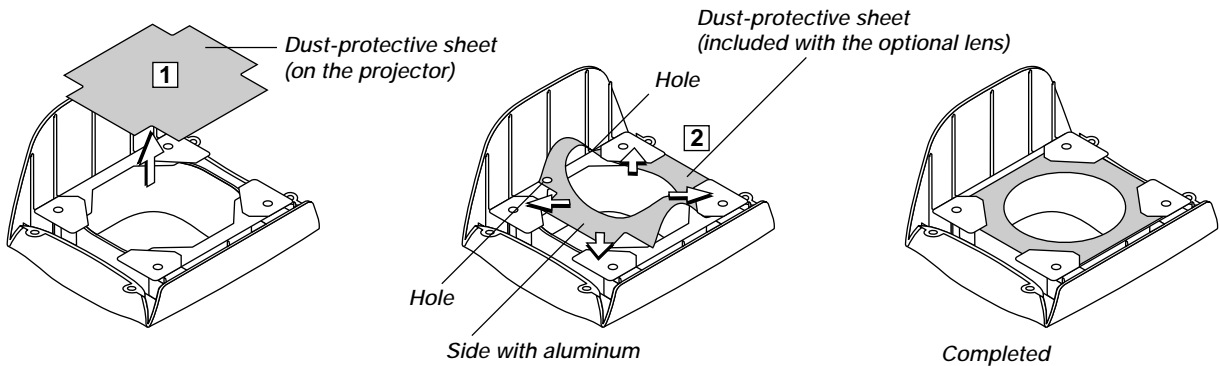
### 1. Remove the lens hood cap and lens hood.

- 1 Press and hold the catches on both ends of the lens hood cap, and 2 then remove it.
- 3 Loosen the 4 screws on the lens hood using the hexagonal driver until the hexagonal driver goes into a freewheeling condition and 4 remove the lens hood. The 4 screws are not removable.



### 2. Remove the dust-protective sheet and replace with the new one.

- 1 Remove the dust-protective sheet on the back of the lens hood. 2 Replace it with the dust-protective sheet included with the optional lens. Place the dust-protective sheet with the two holes side up while warping it. Be careful not to fold the sheet.

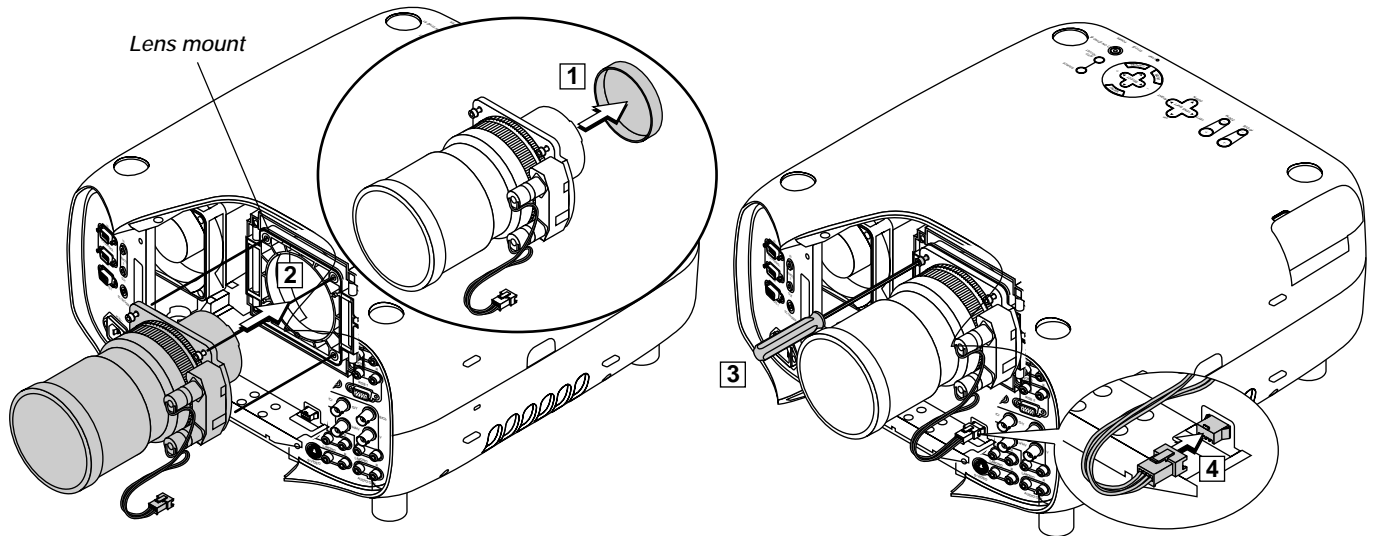




**3. Mount the lens unit on the projector and connect the extension cable attached to the projector.**

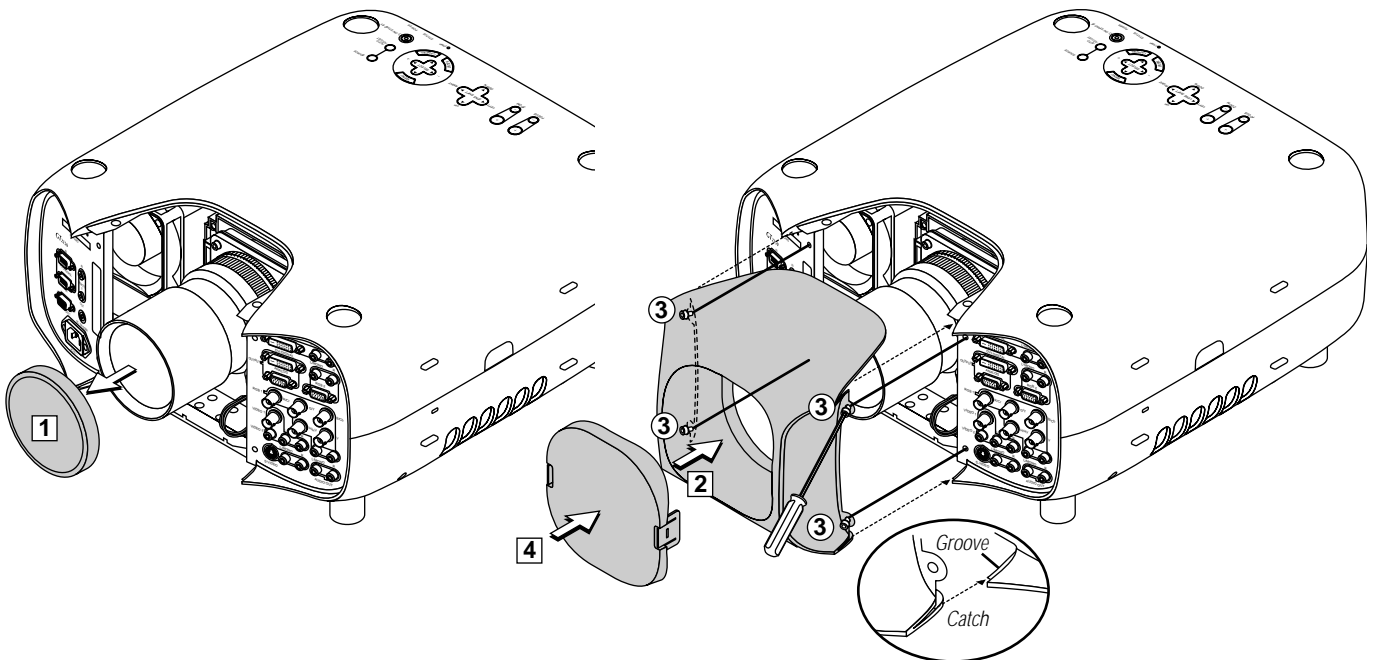
- 1 Remove the lens cap from the rear end of the lens unit.
- 2 Insert the lens unit so that the 4 screws on the lens unit are properly lined up with the 4 holes on the lens mount.
- 3 Secure the 4 screws using the hexagonal driver.
- 4 Insert the connector of the lens unit fully into the socket of the extension cable attached to the projector.

**NOTE:** Leave the front lens cap for protection while mounting the lens unit.

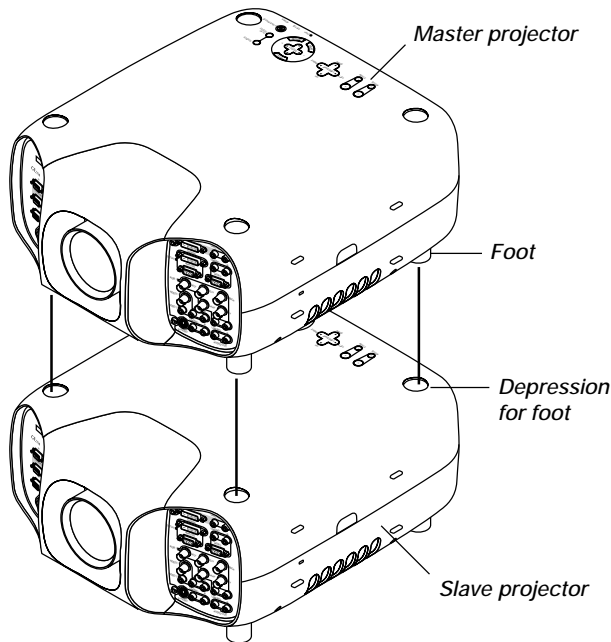


**4. Reinstall the lens hood.**

- 1 Remove the front lens cap from the lens unit.
  - 2 Insert the lens hood so that the grooves on the 4 corners of the lens hood are properly lined up with the 4 catches on the projector.
  - 3 Secure the 4 screws using the hexagonal driver.
- This completes installation. 4 If necessary, put the lens hood cap on the lens hood.



## Setting up for Double Stacking in Link Mode



**NOTE:** Up to two units can be gravity stacked without external support. In some cases, however, two images will not align on the screen correctly. This will become more apparent when displaying small text and detailed graphics.

**CAUTION:** To prevent the projectors from falling, install them in a place and fasten them in a way with sufficient strength to support the two projectors.

**NOTE:** SW 1 Level and SW 2 Level of Switcher Control are not available on Link Mode.

For double stacking, follow the instructions described below.

### 1) Stacking the Projectors

1-1. Place the projectors at the proper height for best screen to projector relationship. Make sure that all projectors have the same display orientation.

### 2) Hookup

2-1. Use commercially available RGB signal cables to connect the RGB output of the master projector to the RGB input of the slave projector until all the projectors are connected.

2-2. Next, using a commercially available, bi-directional RS-232C cable connect the PC CONTROL OUT terminal of the master projector to the PC CONTROL IN terminal of the slave projector until all the projectors are connected.

2-3. Turn all the projectors on and roughly make some optical adjustments to each projector.

### 3) Adjusting and registering signals to be projected in Link mode and stack application.

#### Signal Data Preparation

3-1. Create data for the master projector and copy data to the slave projector.

3-1-1. Choose one projector as the master.

3-1-2. Turn the master projector on.

3-1-3. Display all desired input signals, make adjustment to each signal, then save all adjustments on the master projector. (Adjustments will be saved automatically.)

3-1-4. Turn the master projector off (standby mode).

3-1-5. Store all the adjustments on a CompactFlash card from the master projector.

3-1-5-1. Insert a CompactFlash card into the PC Card slot.

**NOTE:** Be sure to insert a CompactFlash card into the PC Card slot with its front side facing downward.

3-1-5-2. Press and hold CANCEL, then press POWER on the top panel of the master projector. The POWER indicator will change to steady green and the PC Card Access indicator will start flashing. After storing data on the CompactFlash card, the POWER indicator will change to orange.

3-1-5-3. Remove the CompactFlash card from the slot of the master projector.

3-1-6. Transfer the data to the other slave projector using the CompactFlash card so that all the projectors have the same data in memory.

3-1-6-1. Insert the CompactFlash card into the slot of the slave projector.

**NOTE:** Since data in the slave projector will be lost at this time, make backup copies of them before proceeding.

3-1-6-2. Press and hold ENTER, then press MENU on the top panel of the slave projector. The POWER indicator will change to steady green and the PC Card Access indicator will start flashing to indicate that the data is being copied from the CompactFlash card to the slave projector. After copying data to the slave projector, the POWER indicator will change to orange.

3-1-6-3. Remove the CompactFlash card from the slave projector.

**NOTE:** If you select the RGB1 input on the master projector, you must select the same input on the slave projector and the RGB2 on the master projector and the slave projector.

**NOTE:** After adjusting and registering signals as mentioned above, you must change the input to RGB on the Entry Edit Command window for Link Mode. See "Entry List Edit" on page E-41 for changing to RGB source.

3-1-6-4. Display the desired source.

### 4) Display the internal crosshatch test pattern.

**NOTE:** Use a different single color for each projector. Example:

Turn on Green of one projector (master), then Red of the other (slave).

### 5) Adjusting the lens shift, zoom and focus to clearly display all projected patterns.

5-1. Adjust the Lens Shift using the LENS SHIFT button on the projector cabinet. You can also adjust the Lens Shift by pressing and holding CTL and pressing the POSITION button on the remote control. For Lens Shift Adjustable Range, see page E-13.

5-2. Zoom the lens in and out by using the ZOOM button on the projector cabinet or the remote control.

5-3. Adjust the lens focus by using the FOCUS button on the projector cabinet or the remote control.

**NOTE:** If the physical (vertical) alignment of the projector is not correct, adjust the height of the feet. If there is any keystone distortion, use Keystone adjustment to correct and save the settings on each projector. See page E-45 for Keystone correction.

This completes set-up and adjustments. An image is projected from the master projector. See page E-50 for Link mode.

## 6) Link Mode Setting

6-1 Assign a unique Projector ID for each projector.

6-1-1. Select [Projector Options] → [Setup] → [Page 5] → [Projector ID].  
See page E-50 for specifying ID.

6-1-2. Specify a unique projector ID for each projector.

6-2 Select the same communication speed for all the projectors.

6-2-1. Select [Projector Options] → [Setup] → [Page 5] → [Communication Speed]. See page E-50 for setting the communication speed.

6-2-2. Select the appropriate speed between 4800 and 38400.

6-3 Set the Link Mode on each projector.

6-3-1. Select [Projector Options] → [Link Mode].

6-3-2. First select [Slave] on the slave projector.

6-3-3. Select [Master] on the master projector. See page E-50 for setting Link Mode.

6-4 Project a source image from all projectors

6-4-1. Display any signal onto the screen.

6-4-2. Check to see if the images on the master projector are displayed in synchronization with the ones on the other slave projector while the projectors are in link mode.

**NOTE:** Registering signals is not possible in the Link mode. To register a signal, first set "Link Mode" to "Standalone" on the menu and then repeat the above steps from 3. If you select an unregistered signal, the master projector displays the image, but the slave projector doesn't. To view the information on the currently displayed signal, select [Help] → [Source Information] → [Page1].

6-5 Make adjustments to the slave projector.

**NOTE:** See "List of Menu Items Available on Link Mode" on page E-62 for more information.

6-5-1. Temporarily, change the master projector from Master to Standalone. Make sure that the slave projector is still in Slave mode.

6-5-2. Display a source you want to adjust from the master projector.

6-5-3. On the Slave Projector select the same signal From the Entry List (same No.) as that of the master projector. Display it from the slave projector.

6-5-4. Make Picture adjustment such as brightness, contrast, or color temperature.

6-5-5. Change the master projector from Standalone to Master to activate the Link Mode

6-6 This completes the Link Mode adjustment procedure.

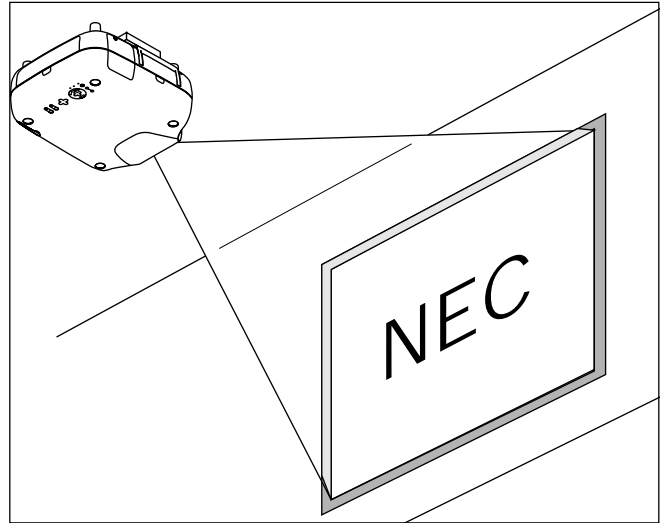
**NOTE:** The optional lenses for GT2150 have different geometrical distortions in wide zoom and tele. Select the best zoom position for stacking where the geometrical distortion is as small as possible. See page E-63 for the recommended throw distances and other notes.

## Projector Orientation

An image can be projected from in front or behind a screen, and the projector can be installed on the ceiling\*.

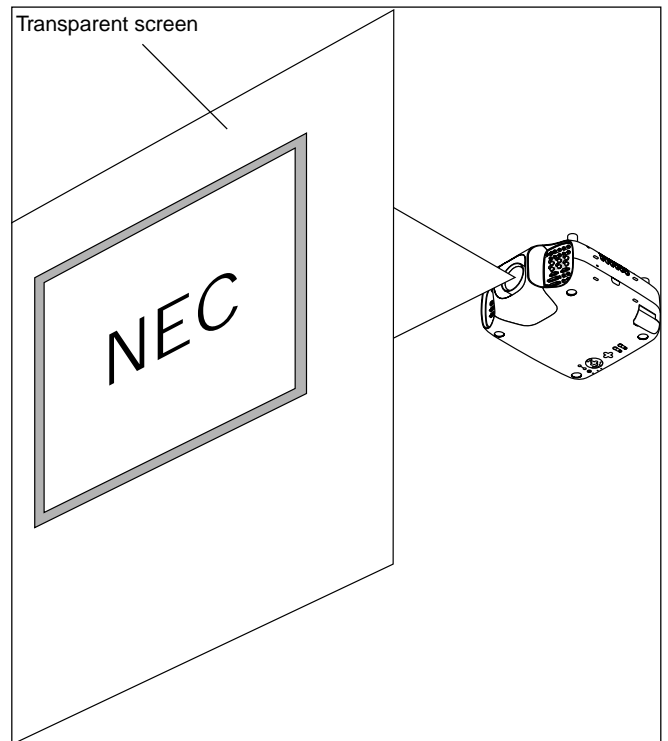
### Ceiling Front Projection

Use [Projector Options] → [Setup] → [Page 1] → [Orientation] to select "Ceiling Front". (See page E-49.)



### Ceiling Rear Projection

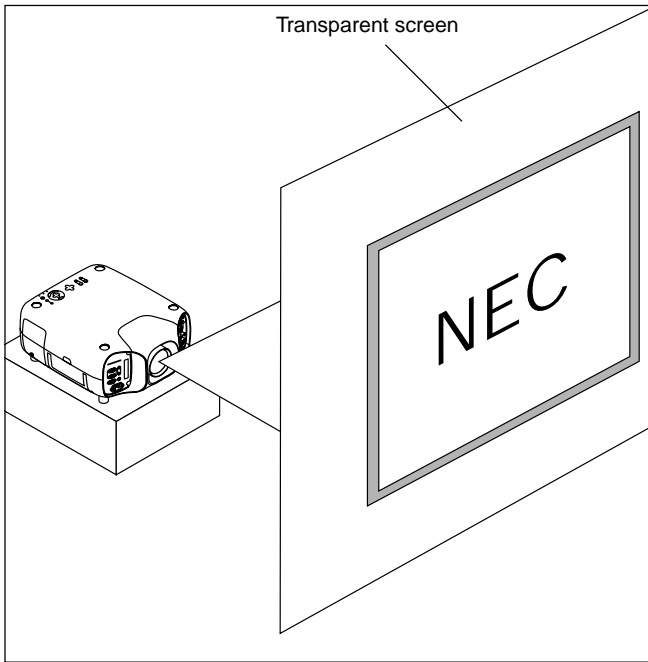
Use [Projector Options] → [Setup] → [Page 1] → [Orientation] to select "Ceiling Rear". (See page E-49.)



---

### Desktop Rear Projection

Use [Projector Options] → [Setup] → [Page 1] → [Orientation] to select "Desktop Rear". (See page E-49.)



### WARNING

- Installing your projector on the ceiling must be done by a qualified technician. Contact your NEC dealer for more information.
- \* Do not attempt to install the projector yourself.
- Only use your projector on a solid, level surface. If the projector falls to the ground, you can be injured and the projector severely damaged.
- Do not use the projector where temperatures vary greatly. The projector must be used at temperatures between 32°F (0°C) and 95°F (35°C).
- Do not expose the projector to moisture, dust, or smoke. This will harm the screen image.
- Ensure that you have adequate ventilation around your projector so heat can dissipate. Do not cover the vents on the projector.

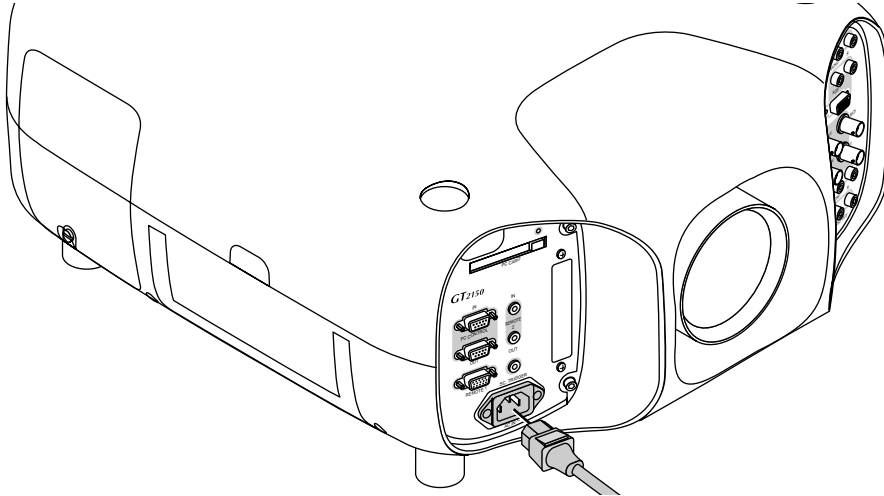
# 3. BASIC OPERATION

## Connecting the Power Cable and Turn on the Projector

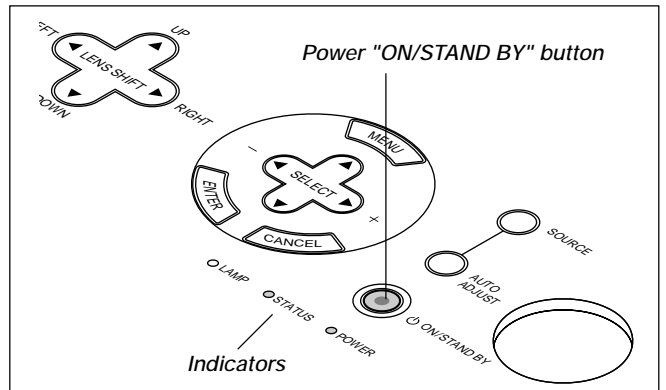
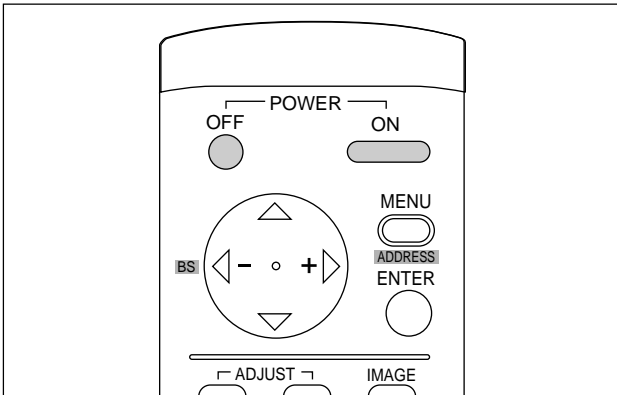
Before you turn on your projector, ensure that the computer or video source is turned on and that your lens hood cap is removed.

### 1. Connect the supplied power cable to the projector.

Plug the supplied power cable in the wall outlet. The projector will go into its standby mode and the power indicator will glow orange.



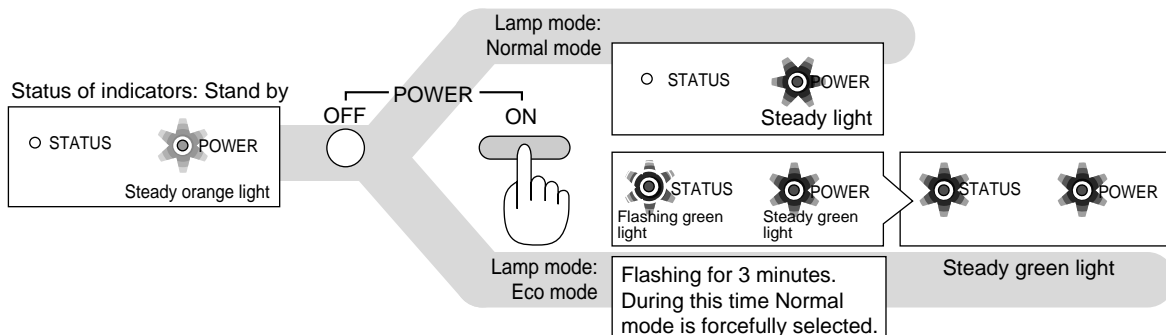
### 2. Turn on and off the Projector.



#### To turn on the projector:

Only after you press the "ON/STAND BY" button on the projector cabinet or "POWER ON" button on the remote control will the power indicator turn to green and the projector become ready to use.

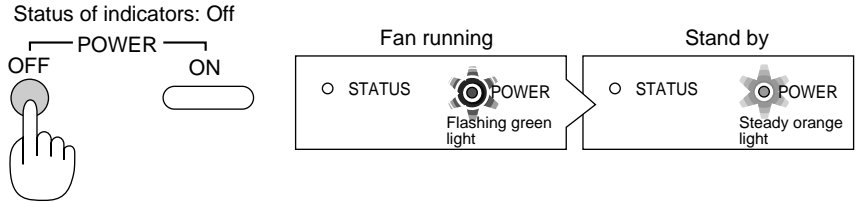
**NOTE:** Immediately after turning on the projector, screen flicker may occur. This is not a fault. Wait 3 to 5 minutes until the lamp lighting is stabilized.



**To turn off the projector:**

First press the Power (ON/STANDBY) button on the projector cabinet or the POWER OFF button on the remote control for a minimum of two seconds. The power indicator will glow orange. After the projector turns off, the cooling fans keep operating for three minutes.

*NOTE: Do not disconnect the power cable during this time. Then, unplug the power cable. The power indicator will go out.*



**About Startup Screen**

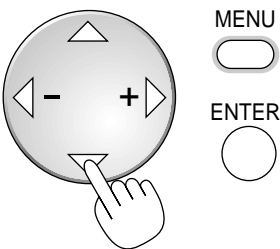
**(Menu Language Select screen)**

When you first turn on the projector, you will get the Startup screen.

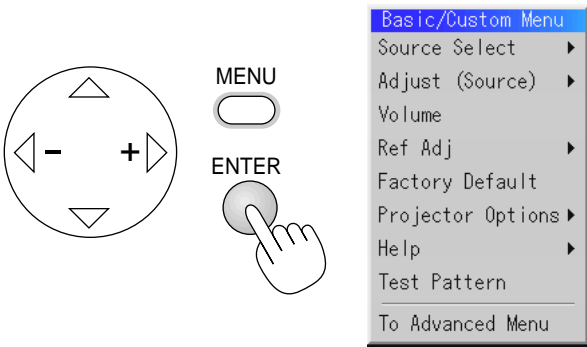
This screen gives you the opportunity to select one of the seven menu languages: English, German, French, Italian, Spanish, Swedish and Japanese.

To select a menu language, follow these steps:

1. Use the Select ▲ or ▼ button to select one of the seven languages for the menu.



2. Press the Enter button to execute the selection.



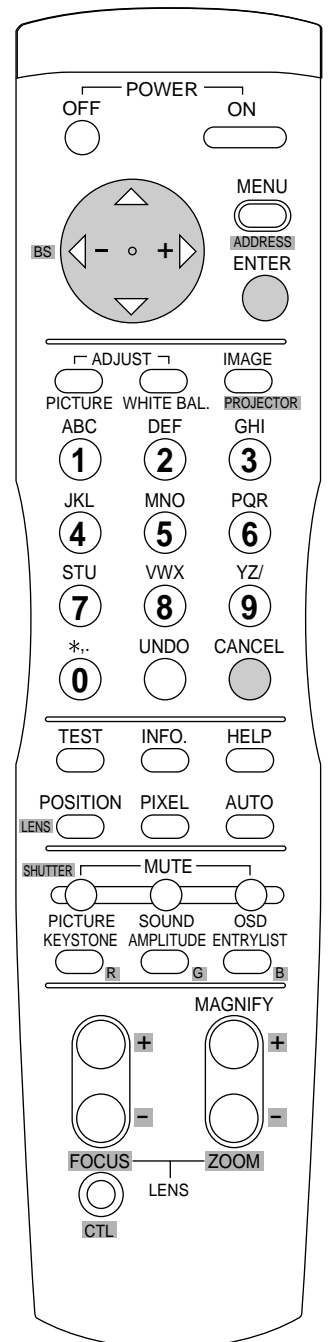
3. The Basic/Custom menu will be displayed in the language you have selected.



To close the menu, press the Cancel button.

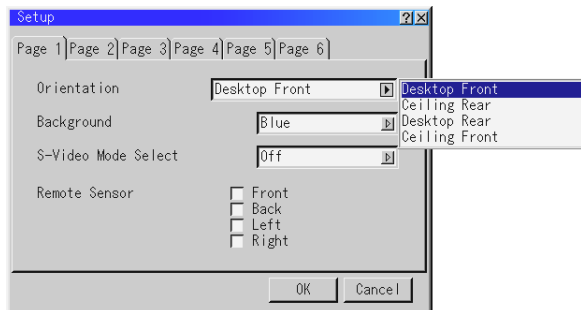
After this has been done, you can proceed to the advanced menu operation.

If you want, you can select the menu language later. See "Language" on page E-47.

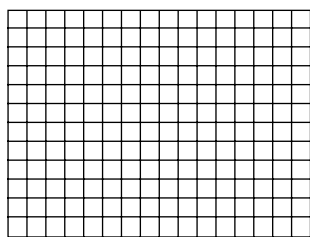


## Set up the projector

1. Turn on the projector
2. Select your type of projection:  
*Desktop front, ceiling rear, desktop rear, and ceiling front.*



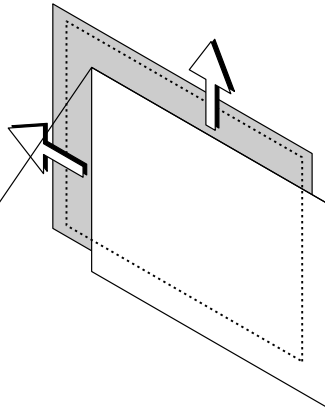
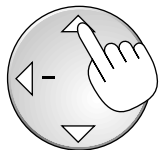
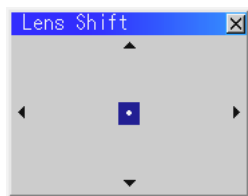
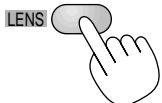
3. Display the test pattern by pressing the TEST button on the remote control or using the menu.



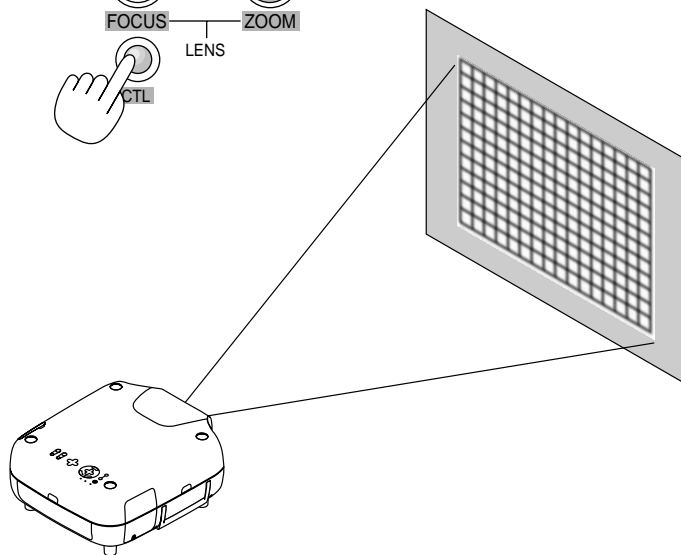
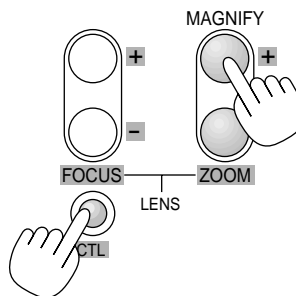
4. Adjust the image position and the image size.

- (1) Press and hold the CTL button and press the POSITION button to display the Lens Shift adjustment screen.  
Use the Select button on the remote control or the LENS SHIFT button on the projector cabinet to move the image horizontally and vertically.  
To close the Lens Shift adjustment screen, press the CANCEL button.  
See [page E-13](#) for "Lens Shift Adjustable Range".

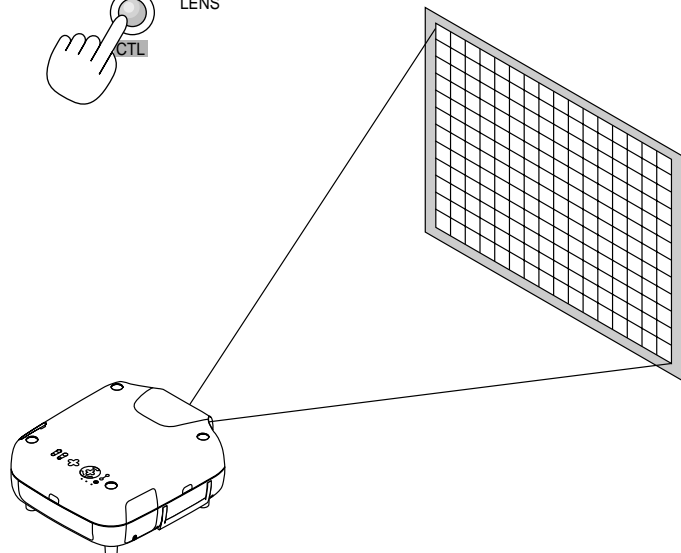
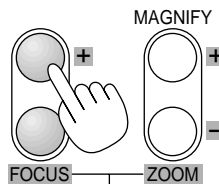
POSITION



- (2) Press and hold the CTL and press the ZOOM + or - button to adjust the image size. You can also adjust the image size by using the ZOOM + or - button on the projector cabinet.

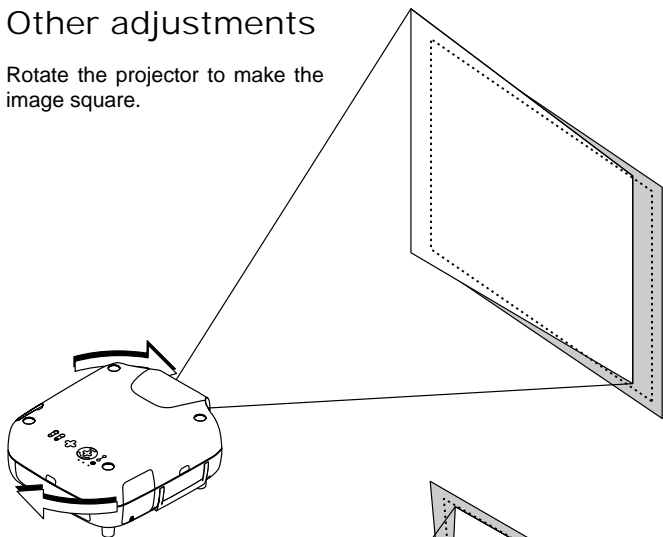


- (3) Press and hold the CTL button and press the FOCUS + or - button to obtain the best focus. You can also adjust the focus by using the FOCUS + or - button on the projector cabinet.

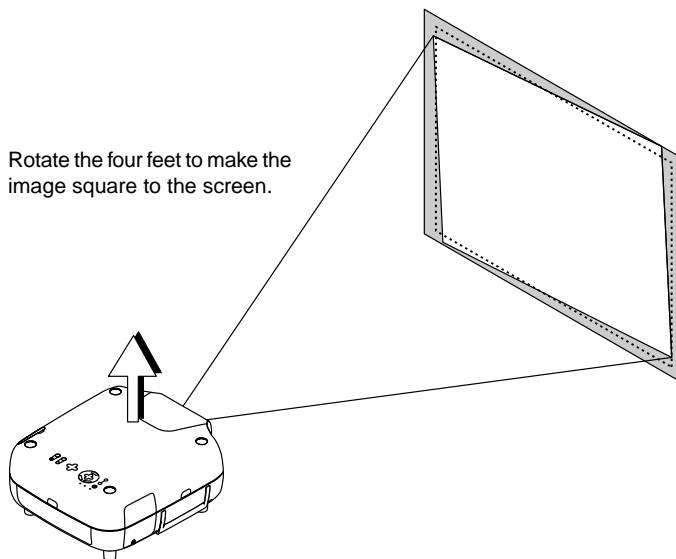


## Other adjustments

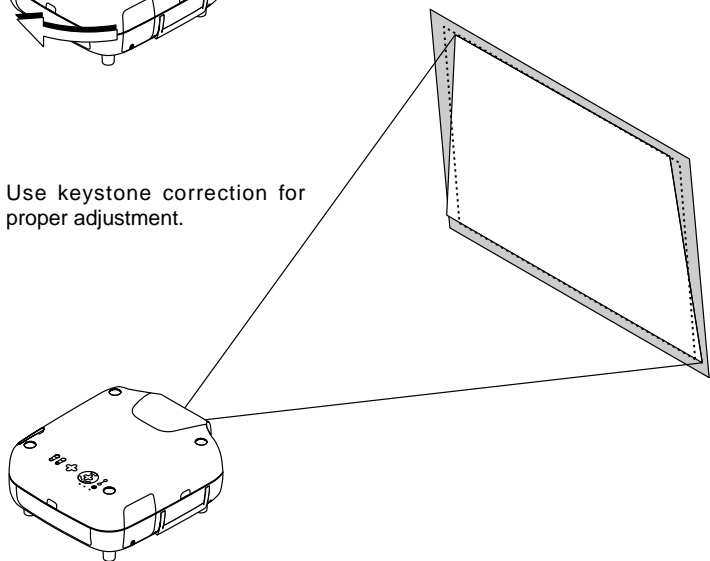
Rotate the projector to make the image square.



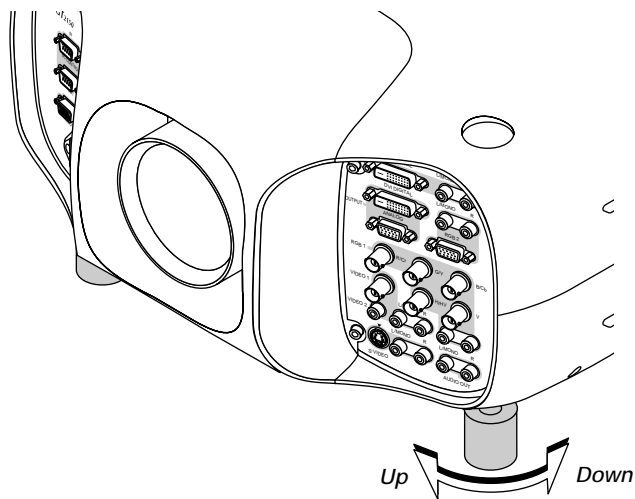
Rotate the four feet to make the image square to the screen.



Use keystone correction for proper adjustment.



Each of the feet height can be changed up to 20 mm (0.78") or at angles up to 3.5 degrees.





# 4. CONNECTIONS

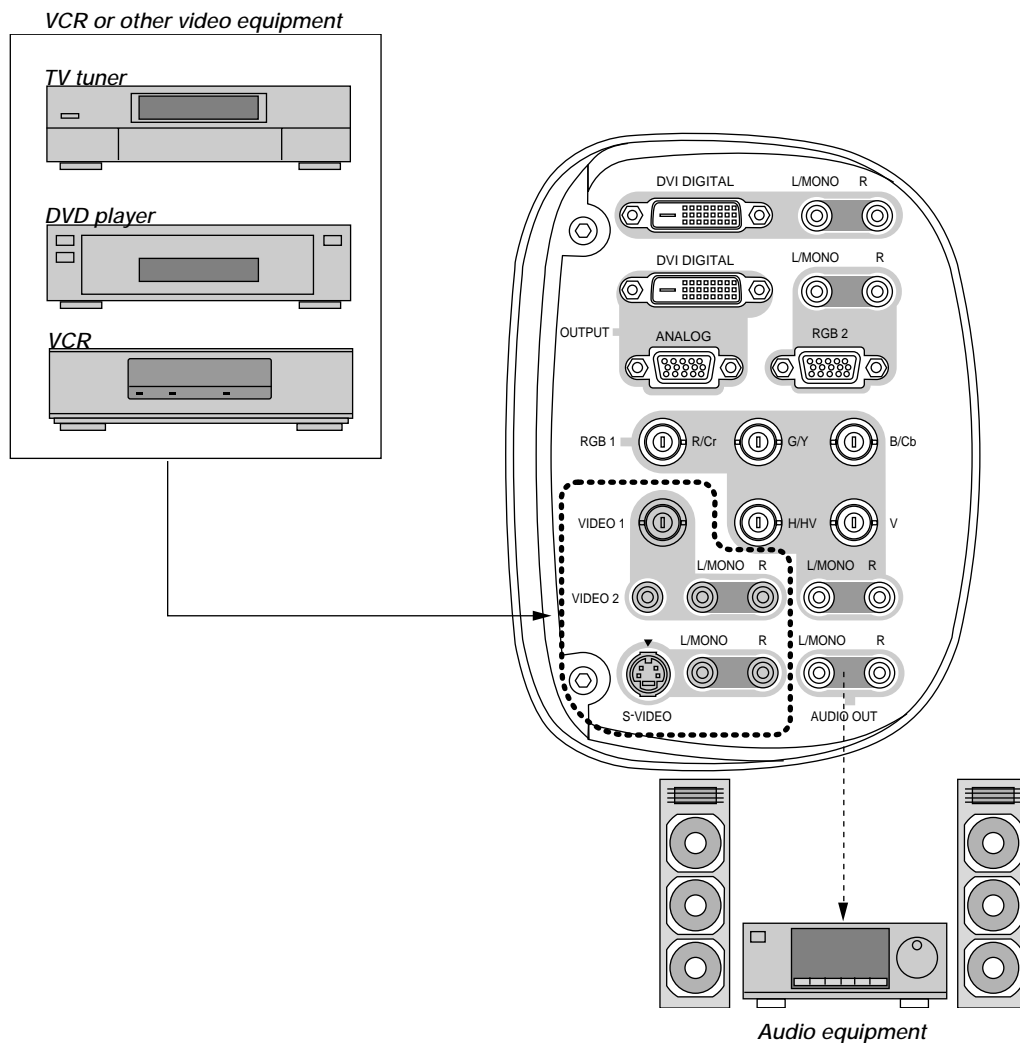
## When used in standalone operation

### Connecting Your VCR Or Laser Disc Player

Use common RCA cables (not provided) to connect your VCR or laser disc player to your GT2150 Projector. To make these connections, simply:

1. Turn off the power to your projector and VCR or laser disc player.
2. Connect one end of your RCA cable to the video output connector on the back of your VCR or laser disc player, connect the other end to the Video input on your projector. Use standard RCA audio patch cords to connect the audio from your VCR or laser disc player to your projector (if your VCR or laser disc player has this capability). Be careful to keep your right and left channel connections correct for stereo sound.
3. Turn on the projector and the VCR or laser disc player.

**NOTE:** Refer to your VCR or laser disc player owner's manual for more information about your equipment's video output requirements.

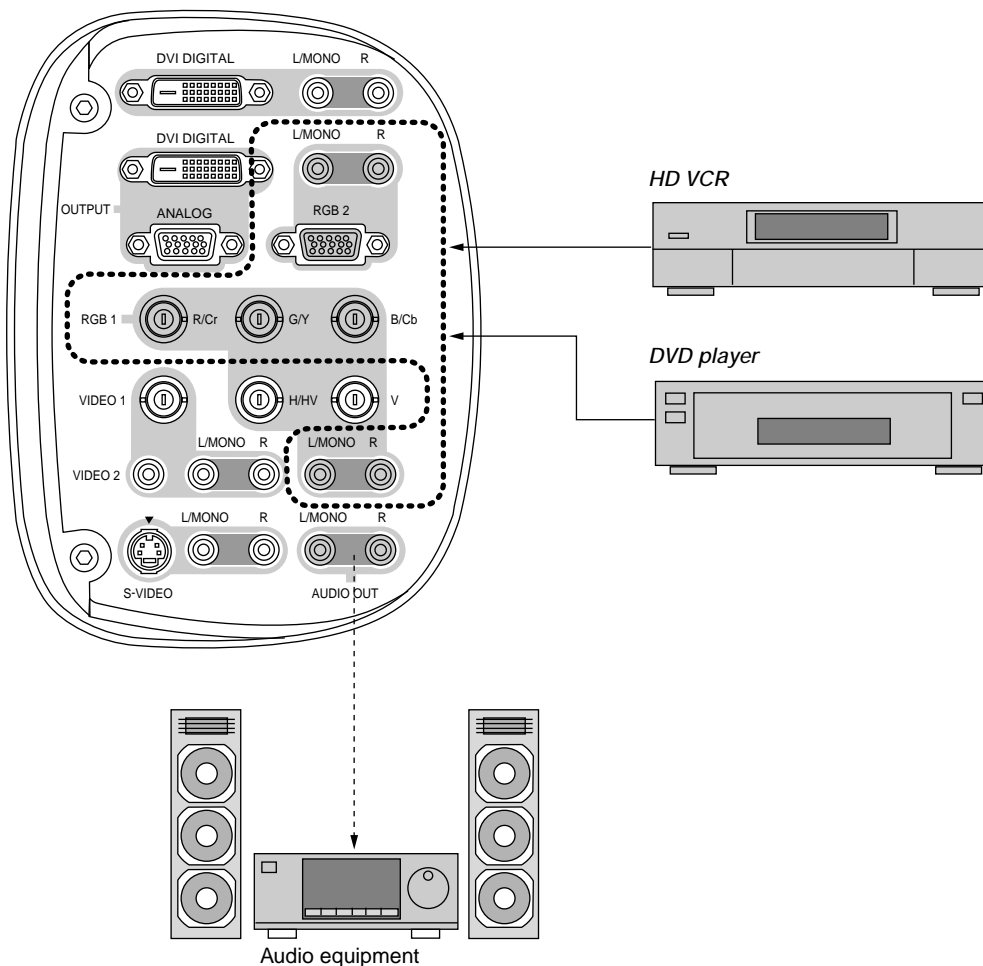


---

## Connecting Your DVD Player with Component Output

Use the optional Component V cable to connect your DVD player with the component output to your GT2150 Projector. To make these connections, simply:

1. Turn off the power to your projector and DVD player.
2. Use the optional Component V cable to connect your DVD player to the RGB 1 input or use a D-Sub 15 pin cable to the RGB 2 input of your GT2150 projector.
3. Turn on the projector and the DVD player.

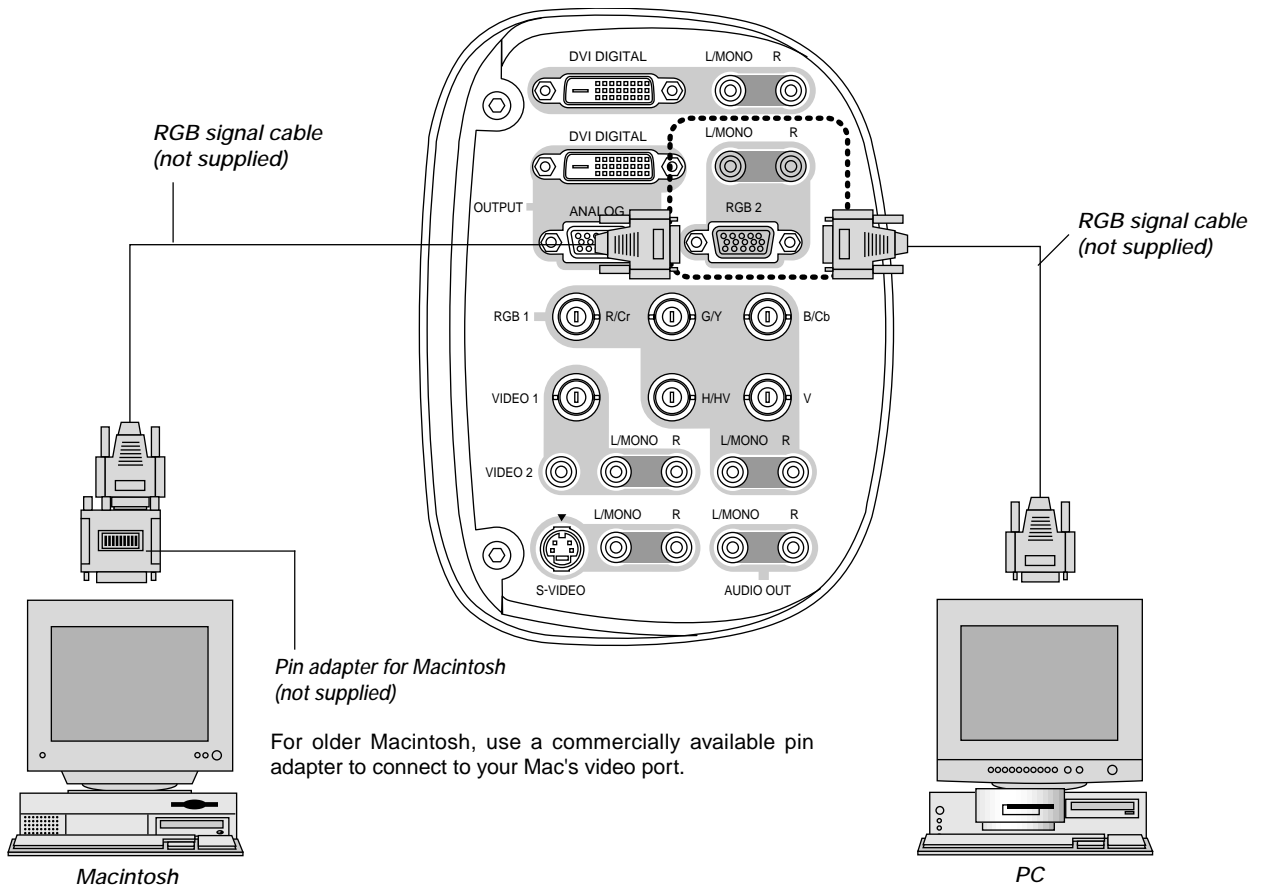


## Connecting Your PC Or Macintosh Computer

Connecting your PC or Macintosh computer to GT2150 Projector will enable you to project your computer's screen image for an impressive presentation.

To connect to a PC or Macintosh :

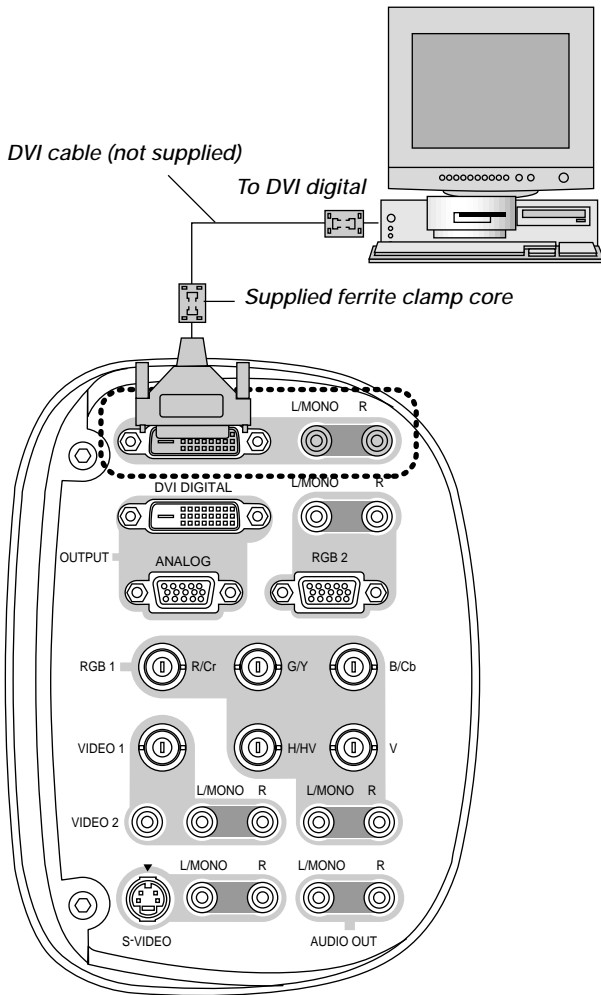
1. Turn off the power to your projector and computer.
2. Use an RGB signal cable (not supplied) to connect your PC or Macintosh computer to the projector.
3. Turn on the projector and the computer.
4. If the projector goes blank after a period of inactivity, it may be caused by a screen saver installed on the computer.



## Connecting a PC with DVI output

The DVI (digital) input accepts up to the SXGA@60Hz signal. SXGA signals with 110 MHz or over of pixel clock cannot be supported.

**NOTE:** The Auto Adjust feature does not work for DVI digital signal. When DVI signal is selected and the image position is not corrected, adjust the horizontal and vertical position using the Position/Clock screen. See page E-43 for more details.



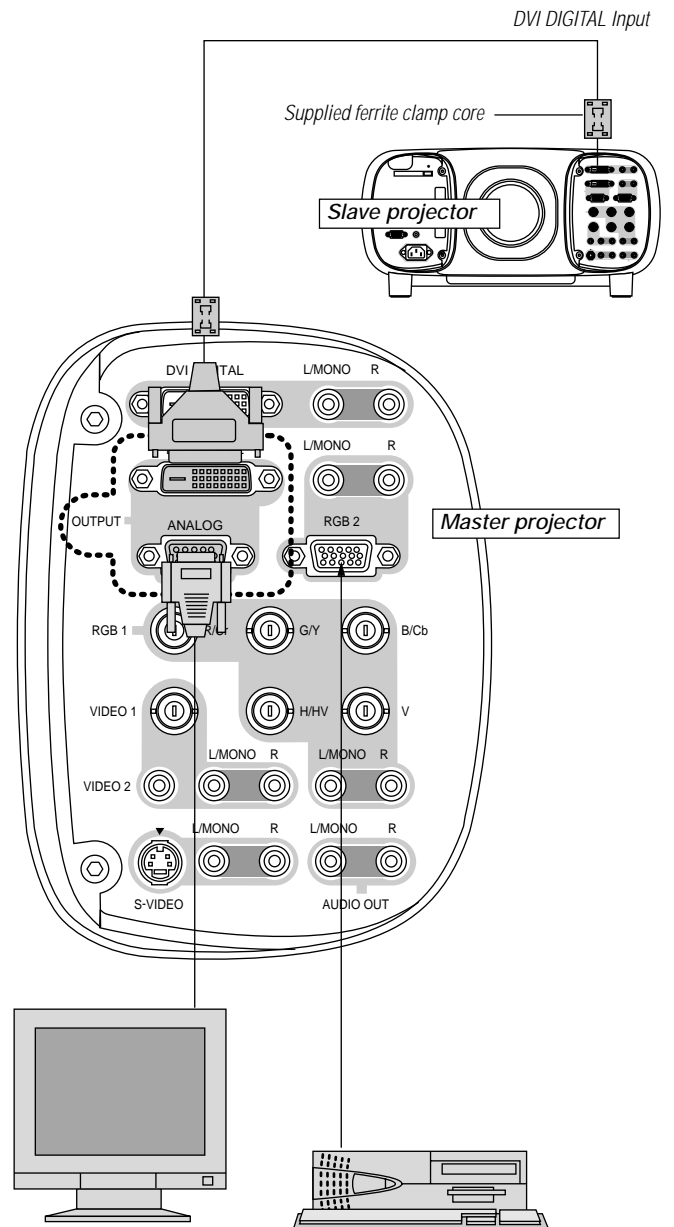
## Using OUTPUT Connectors

You can connect a separate, external monitor to your GT2150 projector to simultaneously view on a monitor the RGB analog, or component image you're projecting. To do so:

1. Turn off the power to your projector, monitor and computer.
2. Use a 15-pin cable to connect your monitor to the ANALOG OUTPUT (Mini D-Sub 15 pin) connector on your projector.
3. Turn on the projector, monitor and the computer.

**NOTE:** The ANALOG OUTPUT connector outputs RGB signal during standby. When the projector goes into standby, the image on an external monitor disappears for a moment.

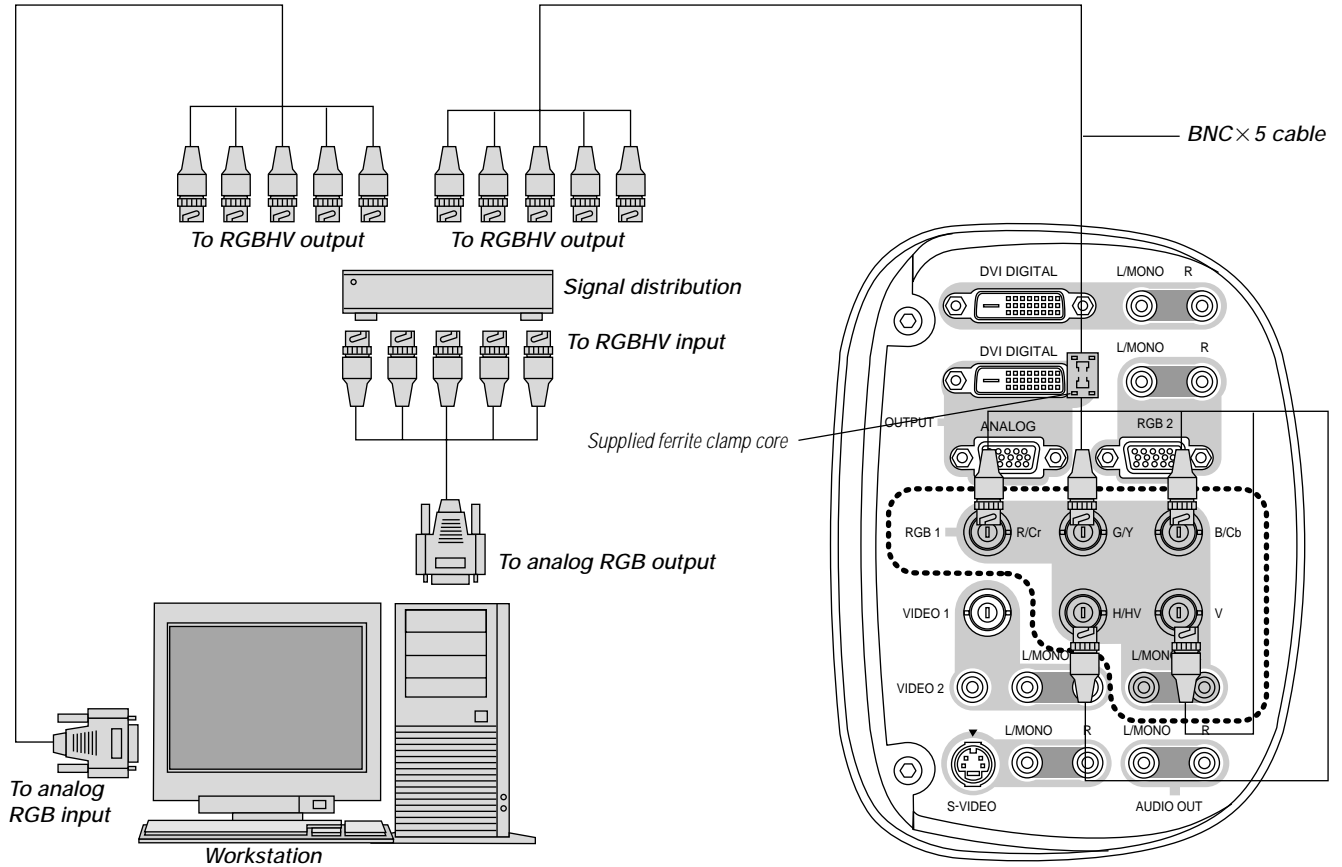
The DVI DIGITAL OUTPUT connector outputs all input signals. The DVI DIGITAL OUTPUT connector is designed for Link mode only. Do not connect the other equipment than another projector to this connector.



## Connecting to a Single Workstation

You can connect a workstation to your GT2150 projector. To do so:

1. Turn off the power to your projector and workstation.
2. Use a BNC x 5 cable to connect your workstation and the RGB 1 connectors on your projector.
3. Turn on the projector and a workstation.



**NOTE:** All cables mentioned above are sold separately.

### Information for Reducing Radiation of Electromagnetic Waves

To reduce unnecessary radiation of electromagnetic waves, use the supplied ferrite clamp core,

#### Installation Instructions

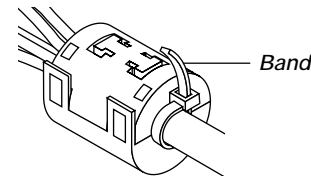
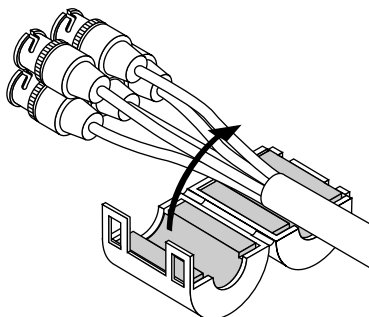
1. Open and attach the ferrite clamp core to a signal cable as close as possible to the end that goes to the projector.

\* Push the catch to open the ferrite clamp core.

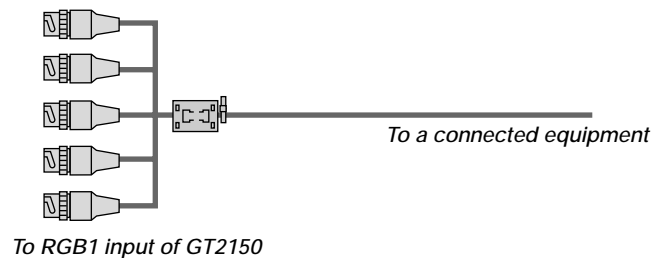
2. Close the ferrite clamp core tightly.

3. Fix the supplied band to the cable as a stopper.

\* Pull the end of the band to tighten it. Cut off the surplus of the band.

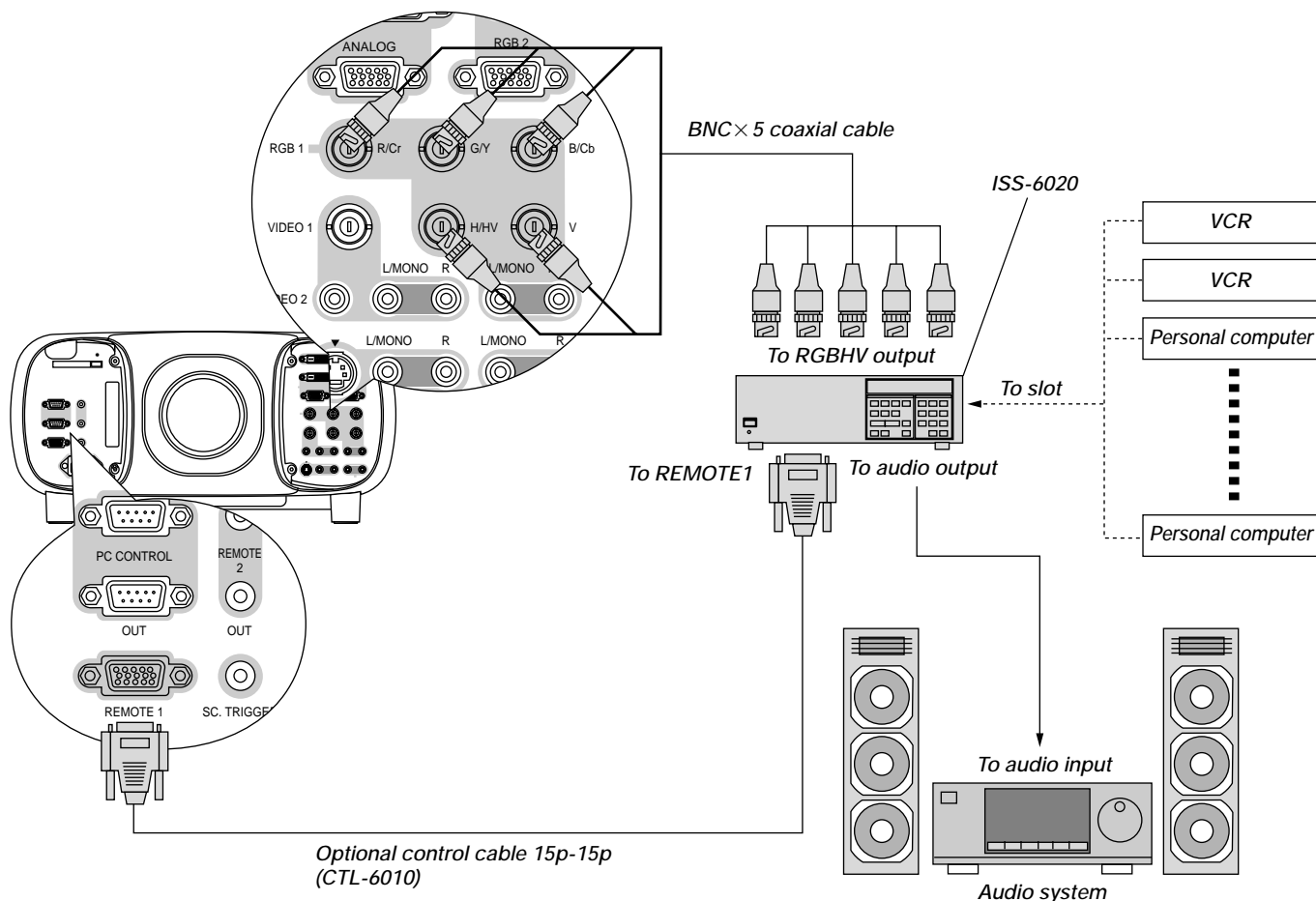


**NOTE:** Be sure to use the ferrite clamp core at the end of the signal cable.



## When Used with One Switcher (ISS-6020/ISS-6020G)

Up to 10 input signals can be accepted when the projector is connected to one Switcher. Using the projector with the Switcher allows easy adjustment and signal selection.



- Select [Projector Options] → [Switcher Control] → [SW1 Level]. See page E-51 for the information in detail.
- For more information on the Switcher, refer to the user's manual accompanying the ISS-6020/ISS-6020G Switcher.
- All cables mentioned above are sold separately.
- The RGB2 terminal will not work with the Switcher Control function.

To use the projector with the Switcher ISS-6020 in the Switcher Control mode,

- \* When connecting with the VIDEO INPUT MODULE (6020-VID), set the VIDEO MODE select switch (S3001) to "8". The VIDEO MODE select switch is located on the VIDEO INPUT MODULE (6020-VID).

**NOTE:** While in the Switcher Control mode, a video standard is selected at the projector.

- \* If you set the VIDEO MODE select switch (S3001) to "8" with the QUAD DECODER installed in the Switcher ISS-6020, the image will not be displayed correctly.  
In that case, first remove the QUAD DECODER from the Switcher ISS-6020.

For more details, contact your dealer.

---

## When Used with Two or More Switchers (100 Inputs)

Up to 100 inputs can be accepted using the NEC ISS-6020 Switcher.

How to make connections:

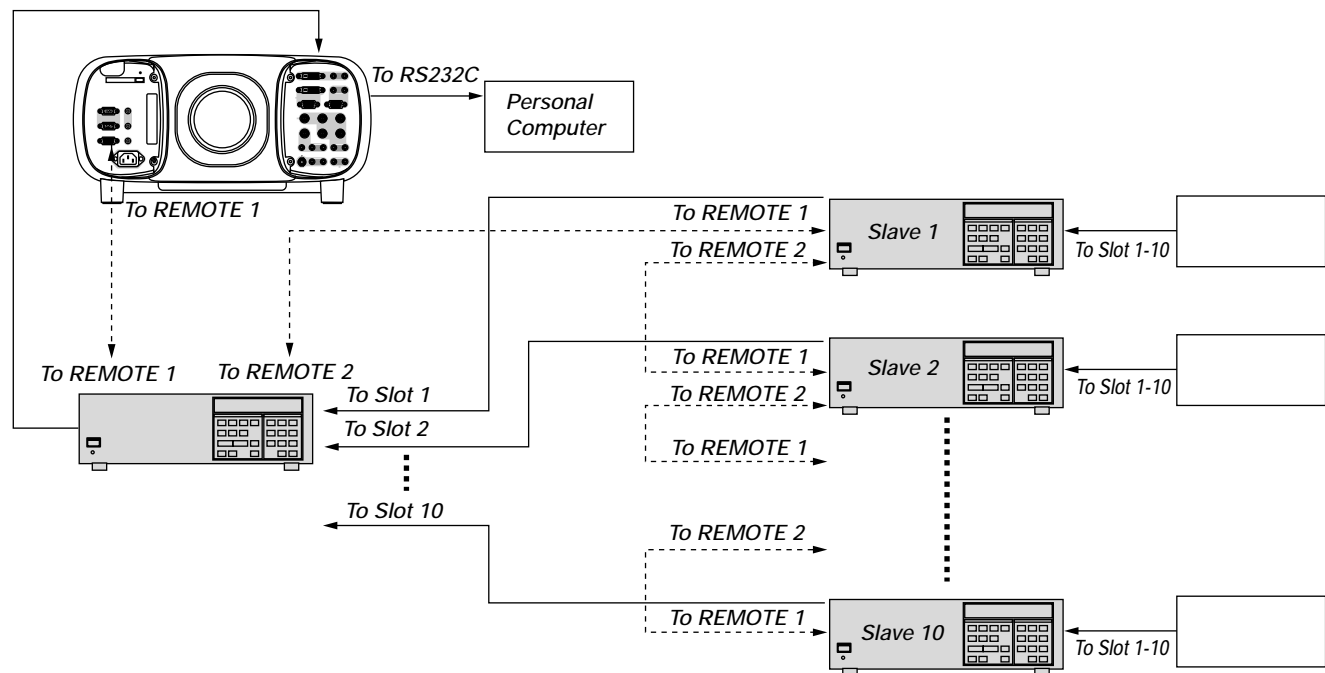
- 1 Connect the REMOTE 1 terminal of the master Switcher to the REMOTE 1 of the projector using the optional control cable (15p-15p/CTL-6010).
- 2 Next connect the REMOTE 2 terminal of the master Switcher to the REMOTE 1 terminal of the first slave Switcher using the same optional control cable as mentioned above. Third, connect the REMOTE 2 terminal of the first slave to the REMOTE 1 of the second slave, and the REMOTE 2 terminal of the second slave to the REMOTE 1 terminal of the third slave (— and the REMOTE 2 of the ninth slave to the REMOTE 1 of the tenth slave). Connect all the Switchers with optional control cables.

- Select [Projector Options] → [Switcher Control] → [SW2 Level]. See page E-51 for the information in detail.
- Refer to the user's manual accompanying the Switcher.
- Cables mentioned are not included with the projector.

---

### NOTE:

- Be sure to set all the slide switches (S8603) of the Switcher to RS-422 positions. Set the one on the last slave Switcher to the appropriate position to match the connected equipment such as a personal computer. (RS-422/RS-232C for PC control of projector)
  - Set the DIP switch S8601 of the Switcher.
- 



---

**NOTE:** The optional remote control RC-6320 for ISS-6020 will not work correctly in the SW Level 1 or 2 mode.

---

To use the projector with the Switcher ISS-6020 in the Switcher Control mode,

- \* When connecting with the VIDEO INPUT MODULE (6020-VID), set the VIDEO MODE select switch (S3001) to "8". The VIDEO MODE select switch is located on the VIDEO INPUT MODULE (6020-VID).

**NOTE:** While in the Switcher Control mode, a video standard is selected at the projector.

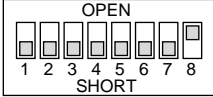
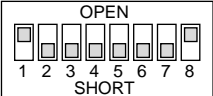
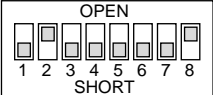
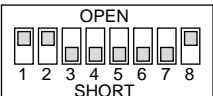
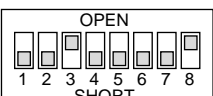
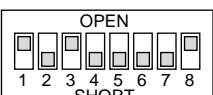
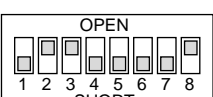
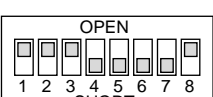
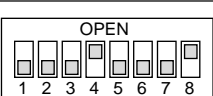
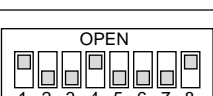
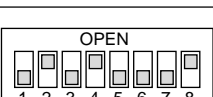
---

- \* If you set the VIDEO MODE select switch (S3001) to "8" with the QUAD DECODER installed in the Switcher ISS-6020, the image will not be displayed correctly. In that case, first remove the QUAD DECODER from the Switcher ISS-6020.

For more details, contact your dealer.

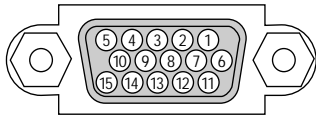
Set the DIP switch (S8601) of the Switcher as follows:

**NOTE:** Slave numbers 1 to 10 must correspond to the master's slot numbers 1 to 10.

ISS-6020 ISS-6020G	Output to	Setting of S8601
<b>Master</b>	The Projector	
<b>Slave 1</b>	Slot 1 of the Master	
<b>Slave 2</b>	Slot 2 of the Master	
<b>Slave 3</b>	Slot 3 of the Master	
<b>Slave 4</b>	Slot 4 of the Master	
<b>Slave 5</b>	Slot 5 of the Master	
<b>Slave 6</b>	Slot 6 of the Master	
<b>Slave 7</b>	Slot 7 of the Master	
<b>Slave 8</b>	Slot 8 of the Master	
<b>Slave 9</b>	Slot 9 of the Master	
<b>Slave 10</b>	Slot 10 of the Master	



## REMOTE 1 Connector



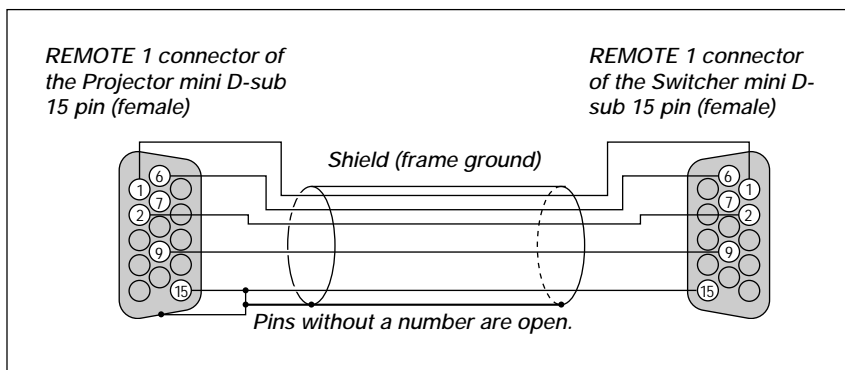
This connector is used for either connecting the ISS-6020/ISS-6020G Switcher or a third party external control device. When the Switcher is used, connect it with the optional control cable (15-15 pin; 50 ft./16m; CTL-6010) to this connector.

### When used with the Switcher.

Pin No.	FUNCTION
1, 2, 6 and 7	Sending and receiving data when the Switcher is used.
9	Identifying the Projector
15	Ground
8,11 and 12	Used inside the Projector. Normally set to OPEN.

When using with the Switcher ISS-6020/ISS-6020G, connect No. 1,2,6,7,9 and15 pins of the projector to the same No. pins of the switcher as shown below.

### Pin Configuration of Optional CTL-6010 Cable



**When used in stand alone operation.**

Pin No.	SHORT/OPEN				FUNCTION
14	SHORT OPEN				External control mode ON External control mode OFF
5	SHORT OPEN				POWER ON POWER OFF
10	SHORT OPEN				PICTURE MUTE ON PICTURE MUTE OFF
3	SHORT OPEN				MUTE SOUND ON MUTE SOUND OFF
4,8,12,11	11pin	12pin	8pin	4pin	
	OPEN	OPEN	OPEN	OPEN	RGB 1
	OPEN	OPEN	OPEN	SHORT	VIDEO 1
	OPEN	OPEN	SHORT	OPEN	S-VIDEO
	OPEN	SHORT	OPEN	SHORT	RGB 2
	OPEN	SHORT	SHORT	OPEN	VIDEO 2
	OPEN	SHORT	SHORT	SHORT	RGB1 (S-VIDEO)
	SHORT	OPEN	OPEN	OPEN	DVI (DIGITAL)
SHORT	OPEN	SHORT	SHORT	RGB1 (VIDEO)	

- \* When the combinations other than specified in the above table are selected, the input will be forcefully switched to RGB 1.
- \* The term "SHORT" means to connect with pin 15
- \* When in the external control mode, the POWER, Source/Alphanumeric, PICTURE MUTE and SOUND MUTE buttons on the remote control will not function.
- \* When the External control mode is set to ON, the following settings are not effective: Timer, Power Management, Power Confirmation, Default Source Select.

**NOTE:** Pin 13 is the external remote signal terminal. The projector can be controlled by the same format signal as the supplied remote control from the external controller regardless of setting on Pin 14.

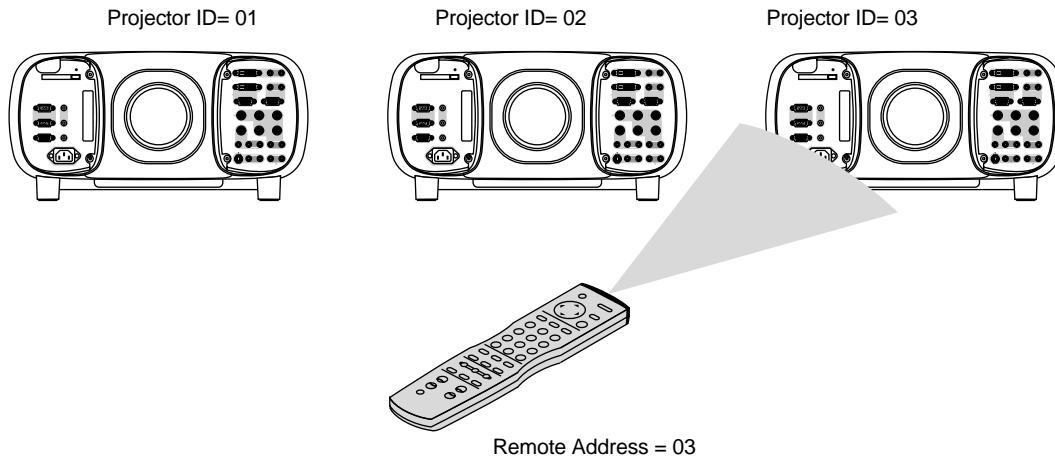
**NOTE:** When turning off the power to the projector using the external control, do not disconnect the plug from the power outlet. These procedures are to protect your projector and the connected equipment.

---

## Operating Multiple Projector with Remote Control

You can operate multiple projectors with the same remote control in wireless operation.  
To do so:

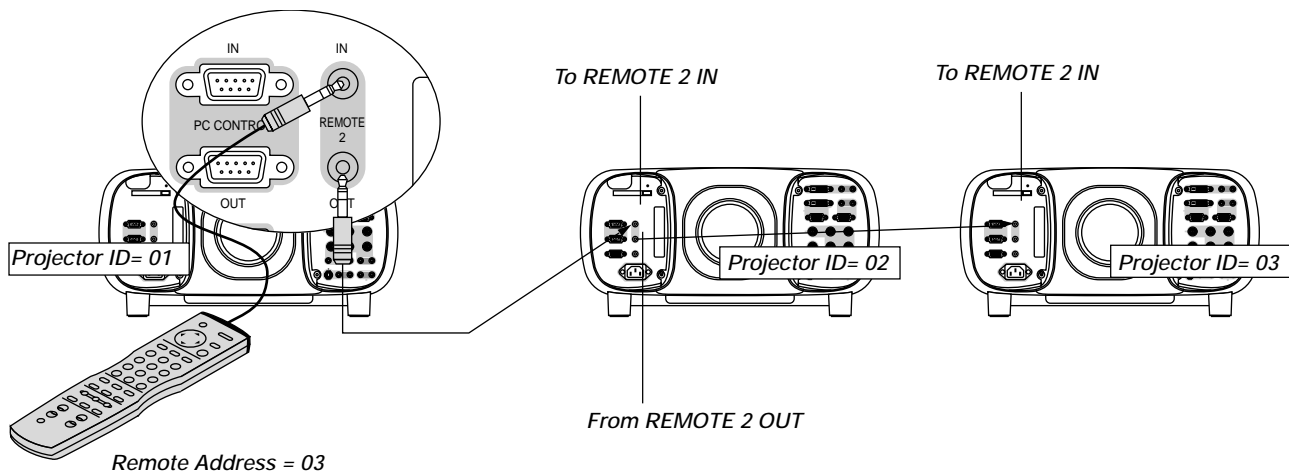
1. Select [Projector Options]→[Setup]→[Page 5]→[Projector ID] and assign an ID number to each projector. See also page E-50.
2. On the remote control specify the ID number of the projector to be adjusted. Press and hold the CTL and press MENU (ADDRESS) button to enter the ID number.  
You can operate the projector assigned the same ID number as the remote control.



You can daisy-chain multiple projectors and operate them separately with the same remote control in wired operation.  
To do so:

- 1) Use the remote control cable to connect the REMOTE 2 Output of one projector to the REMOTE 2 Input of the next projector until all the projectors are connected. Only one remote control cable is supplied with each projector.
- 2) Specify a unique projector ID for each projector.
- 3) Specify the same remote address as the projector ID to be adjusted.

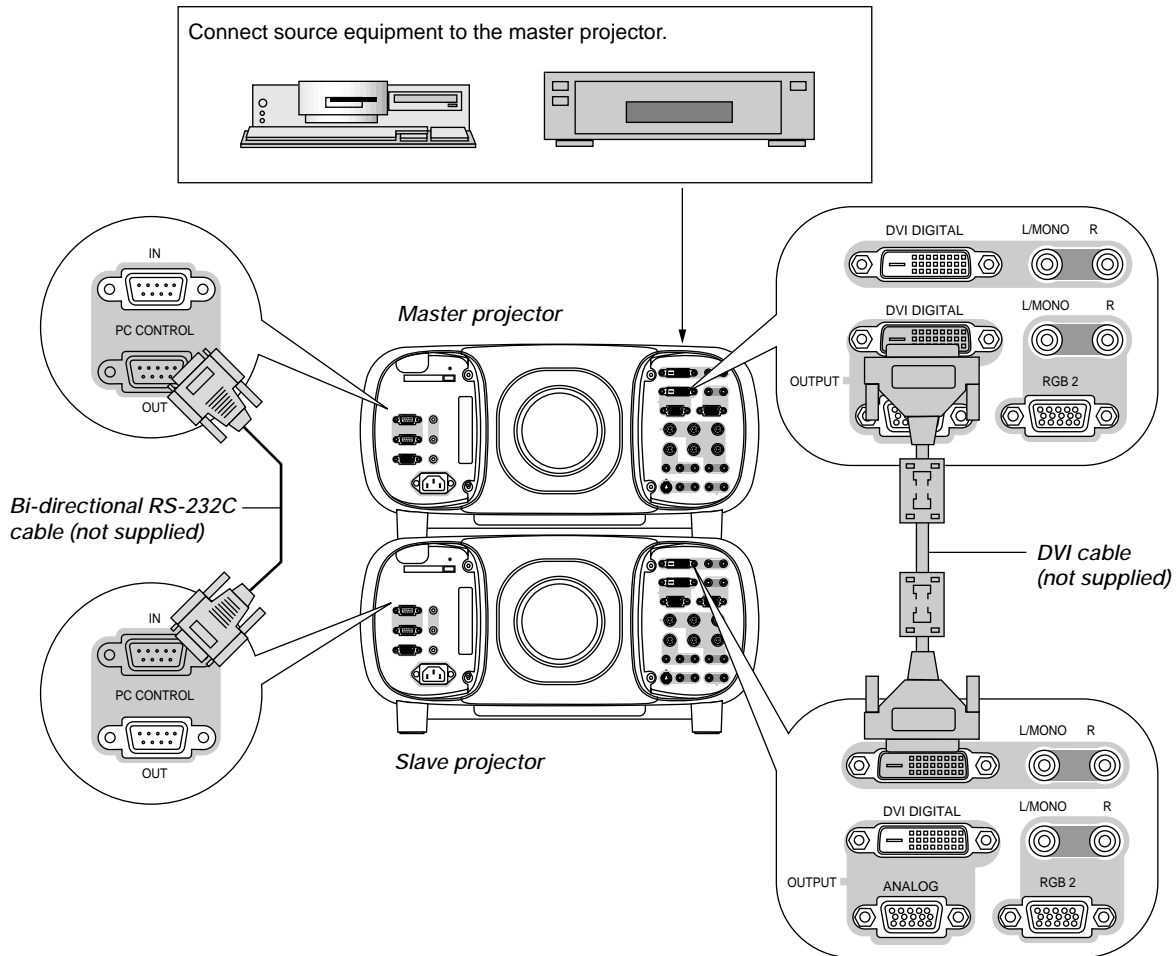
**NOTE:** Specifying "None" for projector ID allows you to operate multiple projectors concurrently. However, some projectors may not synchronize to the other projectors.



## Using the PC CONTROL connectors

The Link mode function allows you to adjust or set multiple projectors using the DVI DIGITAL OUTPUT and the PC CONTROL connectors.

### Connection for Double Stacking in Link Mode



# 5. OPERATION

---

This section describes how to select a computer or video source, adjust the picture and sound, edit a signal and adjust all other settings and adjustments for proper projector set-up.

## General Controls

Before you turn on the projector ensure that the computer or video source is turned on and that the lens hood cap is removed.

### 1. Turn on the Projector

Plug the supplied power cable in the wall outlet. The projector will go into its standby mode and the power indicator will glow orange.

Only after you press the "POWER ON" button on the remote control ("ON/STAND BY" button on the projector cabinet) will the power indicator turn to green and the projector become ready to use.

### 2. Select The Computer Or Video Source

Press one of the Source buttons on the remote control to select the desired source. Or press the MENU button on the remote control and use the Source Select to select your video source: Video, S-Video, RGB or DVI digital.

### 3. Adjust The Image

Press the ADJUST PICTURE button on the remote control or use the menu to adjust the picture.

### 4. Turn Off The Projector

First press the "POWER OFF" button on the remote control ("ON/STAND BY" button on the projector cabinet) for a minimum of two seconds. The power indicator will glow orange. Then, unplug the power cable. The power indicator will go out.

## IMPORTANT:

- The projector should be unplugged if it will not be used for an extended period.
- If you want to turn off the image briefly (five minutes or less), press the MUTE PICTURE button instead of turning the projector off and on.
- The projector will display a black, blue image or logo if no input signal is present.
- Do not turn the projector off and then immediately back on. The Projector needs to cool down for ONE minute before it is powered on again.

---

**CAUTION:** Do not disconnect the power cable while the cooling fan is running.

---

## Using the Menu

1. Press the "Menu" button on the remote control or projector cabinet to display the menu.
2. Press the ▲▼ buttons on the remote control or the projector cabinet to highlight the menu for the item you want to adjust or set.
3. Press the ► button or the "Enter" button on the projector cabinet or the remote control to select a submenu or item.  
**NOTE:** The right-oriented delta symbol indicates further choices are available.
4. Adjust the level or turn the selected item on or off by using "Select" ◀ or ▶ buttons on the remote control or the cabinet. The on-screen slide bar will show you the amount of increase or decrease.
5. Changes are stored until you adjust it again.

ENTER ..... Stores the setting or adjustments.

CANCEL ..... Return to the previous screen without storing settings or adjustments.

---

**NOTE:** The change is stored automatically when any one of the following procedures is performed:

\* The on-screen disappears.

\* The projector goes into standby.

\* One input is switched to another.

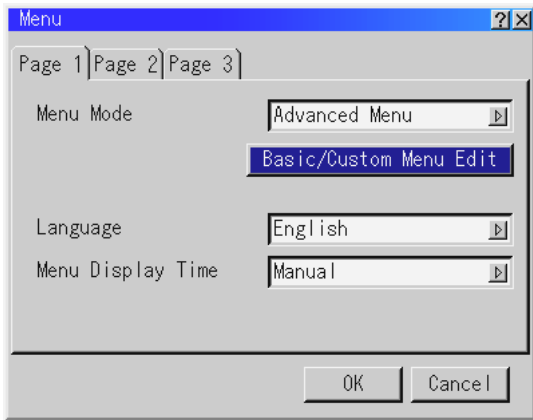
---

6. Repeat steps 2-5 to adjust an additional item, or press "Cancel" on the projector cabinet or the remote control to quit the menu display.

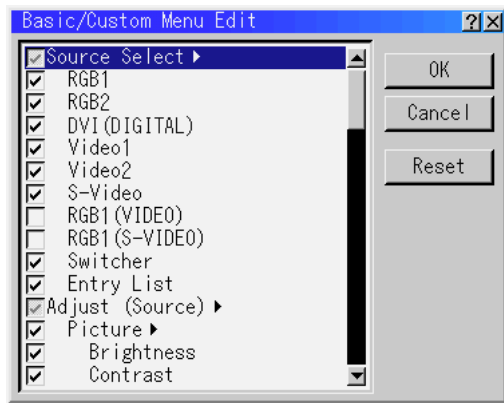
## Customizing Basic/Custom Menu

The Basic/Custom menu can be customized to meet your requirements. Selecting a menu item from the "Basic/Custom Menu Edit" list, allows you to custom tailor the menu items to your needs.

1. Select "Basic/Custom Menu Edit" to display the "Basic/Custom Menu Edit" screen.



2. Use the ▲ or ▼ button to highlight your selection and press the Enter button to place a check mark next to an option. This action enables that feature. Press the Enter button again to clear the check box.



If you select an item with a solid triangle ► and press the Enter button on the remote control or the projector cabinet, you can enable all the items within that submenu.

Also you can turn on an item within the submenu without placing a check mark on the main menu item.

**NOTE:** Up to 12 main menu items (within Basic/Custom Menu Edit, not including submenu items) can be selected.

3. In order for the changes to take effect, use the ◀ or ▶ button on the remote control or the projector cabinet to highlight "OK", then press the Enter button. To cancel the changes, use the ▲ or ▼ buttons to highlight "Cancel" and press the "Enter" button. To return to the factory default, select "Reset" then press the "Enter" button.

### The default Basic/Custom Menu items are:

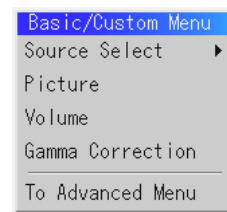
Source Select (RGB1/2, DVI DIGITAL, Video1/2, S-Video and Entry List), Brightness, Contrast, Pixel Adjust and Position.

**NOTE:** Once you have selected OK on the Basic/Custom Menu Edit screen, you cannot cancel the changes on the Menu screen. However, you can re-edit the menu items over again as described in the steps above.

**NOTE:** If the "Advanced Menu" item has been selected on the Menu mode, you get the "Confirmation Change Menu" upon completion of "Basic/Custom Menu" editing. In this case, selecting "Yes" then "Enter" will close all the menus and apply the changes from the Advanced menu to the Basic/Custom Menu. If you select "No" then "Enter" functions, then all menu items will return to the Advanced menu, but your changes will still be available within the "Basic/Custom Menu" selection. To display the previously tailored Basic/Custom Menu, select "Basic/Custom Menu" from the "Menu Mode".



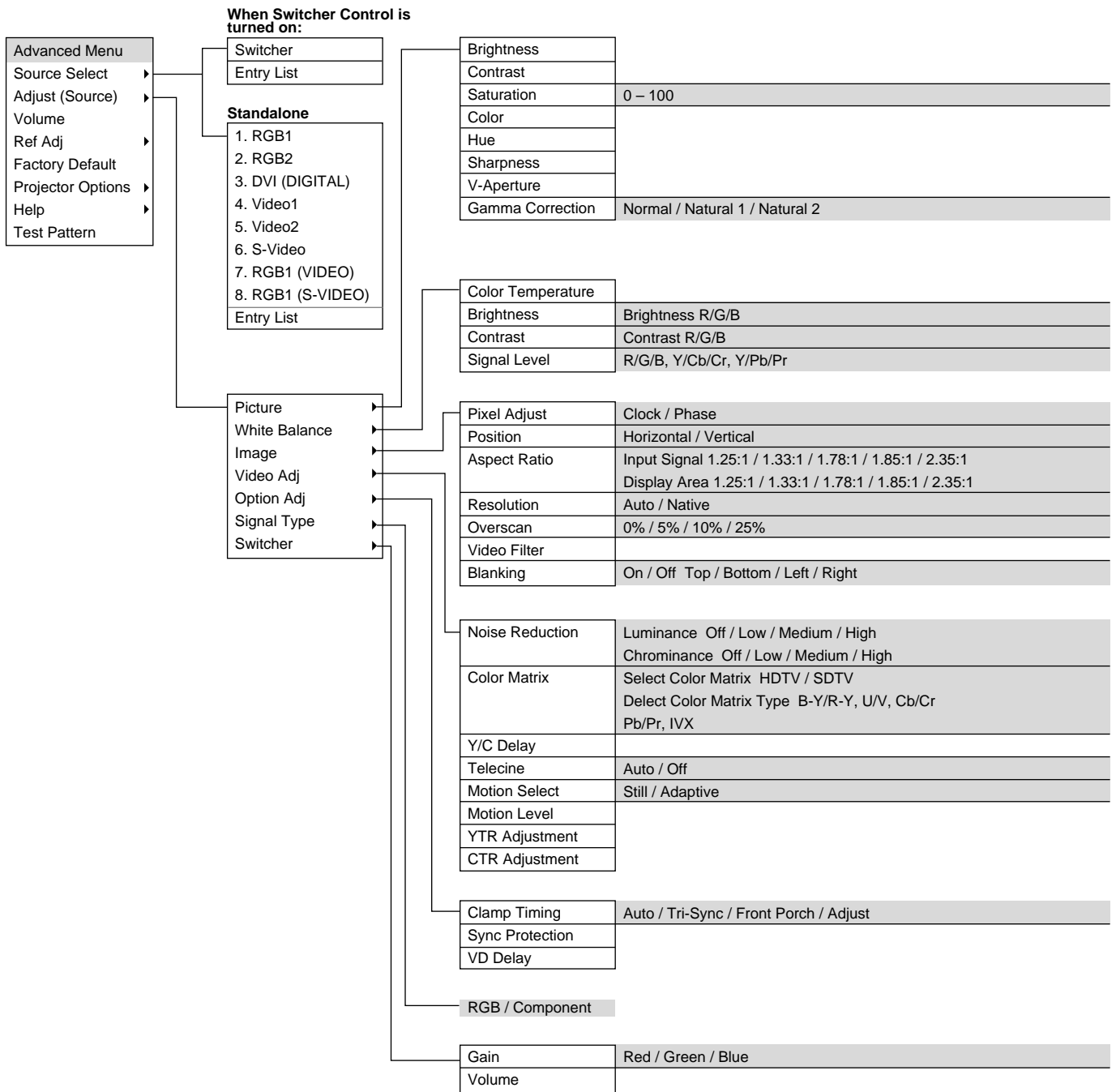
An item "To Advanced Menu" will be added to the bottom of the Basic/Custom Menu. Selecting this item and pressing the "Enter" button will display the "Advanced Menu" features.



## List of Direct Button Combinations

CTL+ SOURCE (1-10)	Switches to any selected signal found in the Entry List. To enable this combination, you must first assign specific remote buttons for direct input selection in the Entry Edit window.
CTL+ ENTER (While displaying Entry list)	Displays the Entry Edit Command window.
CTL+CANCEL	Returns to the previous menu without closing the sidebar or dialog.
CTL+ UNDO	Clears all menus or adjustment/setting screens. All adjustments are saved automatically.
CTL+ ◀/▶/▲/▼	Moves the sidebar or dialog box horizontally or vertically.
While using zoom on remote control:	Displays the magnifying glass icon.
CTL+ ◀ (BS)	Deletes one letter or numeral in the entry screen.
CTL+MUTE OSD	Turns off the on-screen display forcefully.
SOURCE (1-10) in SW Level mode	Displays the Select switcher Input Slot window. <i>NOTE: This feature is available for SW 2 Level mode only. When the SW 1 Level mode is selected, pressing Source button switches to the corresponding slot without displaying the Select Slot window.</i>
CTL+ MENU (ADDRESS)	Displays the remote ID entry window.
CTL+ IMAGE (PROJECTOR)	Sequentially selects the Projector Options sub menu.
CTL+ POSITION (LENS)	Displays the Lens Shift adjustment window.
CTL+ KEYSTONE (R)	Turns on red. Available only when the projector is in the test pattern mode.
CTL+ AMPLITUDE (G)	Turns on green. Available only when the projector is in the test pattern mode.
CTL+ ENTRY LIST (B)	Turns on blue. Available only when the projector is in the test pattern mode. Pressing and holding down CTL and then ENTRY LIST buttons simultaneously, enters a signal in the Entry List when you are not displaying a test pattern.
CTL+ MAGNIFY (ZOOM)	Zooms the lens in and out
CTL+ (FOCUS)	Adjusts the lens focus.

# Menu tree





Advanced Menu
Source Select
Adjust (Source)
Volume
Ref Adj
Factory Default
Projector Options
Help
Test Pattern

Keystone
Lamp Mode
Ref. White Bal.

All Data / Current Signal  
Including Entry List

Timer
Menu
Setup
Link Mode
Switcher Control
LAN Mode

Normal / Eco

Brightness R/G/B, Contrast R/G/B

On / Off Timer	Execute Switch (Active / Inactive) Edit
Sleep Timer	Preset Time (Off / 0:30 / 1:00 / 1:30 / 2:00)

Page 1	Menu Mode (Basic/Custom Menu, Advanced Menu, Service Menu) Basic/Custom Menu Edit Language (English / German / French / Italian / Spanish / Swedish / Japanese) Menu Display Time (Manual / Auto 5 sec / Auto 10 sec / Auto 30 sec)
Page 2	Display Select (Date, Time, Input Terminal, Source Name, Projector ID On/Off) Date Format (MM/DD/YYYY, MM/DD/YYYY ddd, DD/MM/YYYY, DD/MM/YYYY ddd, YYYY/MM/DD, YYYY/MM/DD ddd, Month DD,YYYY, Month DD,YYYY ddd) Data, Time Preset
Page 3	Message (No Input, Clean Filter On/Off) Direct Button (Volume Bar, Keystone Bar On / Off)

Page 1	Orientation (Desktop Front / Ceiling Rear / Desktop Rear / Ceiling Front) Background (Blue / Black / Logo) S-Video Mode Select (Off / S2) Remote Sensor (Front, Back, Left, Right On/Off)
--------	--

Page 2	Signal Select RGB1 (Auto / RGB / Component) RGB2 (Auto / RGB / Component) Sync Termination RGB1 (Hi-Z / 75Ω)
--------	--

Page 3	Signal Select Video1 (Auto / NTSC3.58 / NTSC4.43 / PAL / PAL60 / SECAM) Video2 (Auto / NTSC3.58 / NTSC4.43 / PAL / PAL60 / SECAM) S-Video (Auto / NTSC3.58 / NTSC4.43 / PAL / PAL60 / SECAM) RGB1(Video) (Auto / NTSC3.58 / NTSC4.43 / PAL / PAL60 / SECAM) RGB1(S-Video) (Auto / NTSC3.58 / NTSC4.43 / PAL / PAL60 / SECAM)
--------	--

Page 4	Auto Adjust (RGB Only)      Power Management      Power Off Confirmation Keystone Save                  Built-in Speaker                  Lamp Off Mode Last Memory                      User Name
--------	--

Page 5	Communication Speed (4800 / 9600 / 19200 / 38400) Projector ID (Enable / Disable) 1-64 Default Source Select (Last / Auto / Select) Standalone [RGB1/RGB2/DVI (DIGITAL)/Video1/Video2/S-Video/ RGB1(Video)/RGB1(S-Video)] SW1 Level (Slot 1 – 10) SW2 Level (M-01 S-01 – M-10 S-10)
--------	--

Page 6	Clear Lamp Hour Meter Clear Filter Usage
--------	---

Standalone / Master / Slave

Standalone / SW 1 Level / SW 2 Level

Network Board / Default Gateway

Contents
Source Information
Projector Information

Contents

Page 1	Source Name / Input Terminal / Entry No. / Horizontal Frequency / Vertical Frequency / Sync Polarity
Page 2	Signal Type / Video Type / Sync Type / Interlace / Resolution / Direct Key
Page 3	Aspect Ratio (I) / Aspect Ratio (D) / Gamma Correction / Noise Reduction (L) / Noise Reduction (C) / Color Matrix / Matrix Type

Page 1	User Name / Remaining Lamp Time / Lamp Hour Meter / Filter Usage / Projector Usage / Projector ID
--------	--

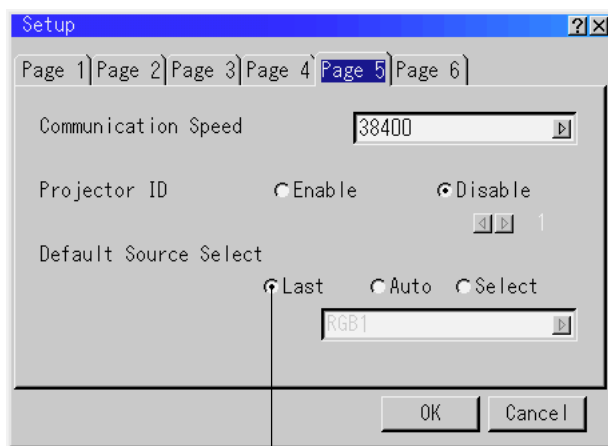
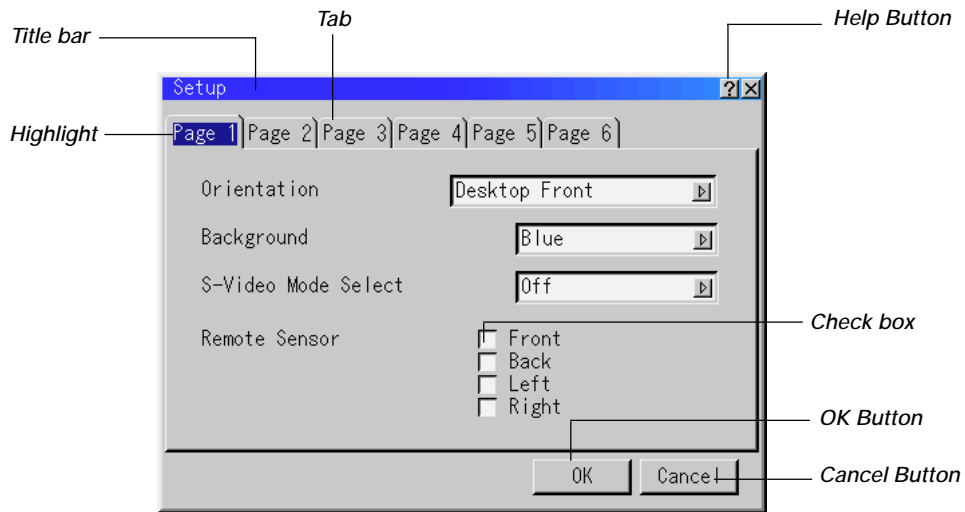
Page 2	Version (BIOS / Firmware / Data / SUB-CPU)
--------	--

Page 3	FPGA Version (OSD / JOE)
--------	--------------------------

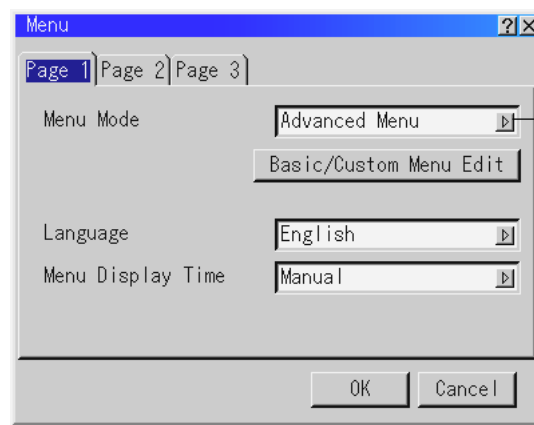
Page 4	Link Mode (Master / Slave)
--------	----------------------------

Cross Hatch, Gray Bars  
Black Raster, Gray Raster (25%)  
Gray Raster (50%), White Raster  
Red / Green / Blue

## Menu Elements



Radio button



Solid triangle



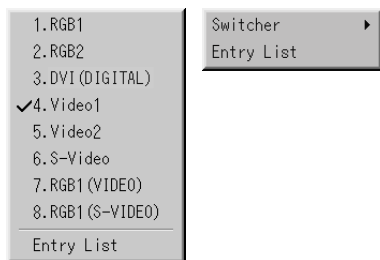
Slide bar

Menu windows or dialog boxes typically have the following elements:

- Title bar: Indicates the menu title.
- Highlight: Indicates the selected menu or item.
- Solid triangle: Indicates further choices are available. A highlighted triangle indicates the item is active.
- Tab: Indicates a group of features in a dialog box. Selecting on any tab brings its page to the front.
- Radio button: Use this round button to select an option in a dialog box.
- Check box: Place a checkmark in the square box to turn the option On.
- Slide bar: Indicates settings or the direction of adjustment.
- OK button: Press to confirm your setting. You will return to the previous menu.
- Cancel button: Press to cancel your setting. You will return to the previous menu.
- Help button: Press the Help button on the remote control to display help.

## Menu Descriptions & Functions

### Source Select

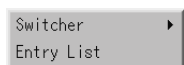


Enables you to select a video source such as a VCR, DVD player, laser disc player, computer or document camera depending on what is connected to your inputs.

Press the up/down buttons on your remote control or the projector cabinet to highlight the menu for the item you want to project.

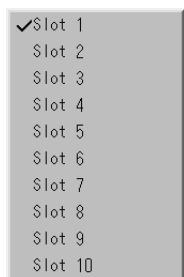
- \* RGB1,2
- \* DVI DIGITAL
- \* Video 1, 2
- \* S-Video
- \* RGB 1 (VIDEO)
- \* RGB 1 (S-VIDEO)

### Swicher



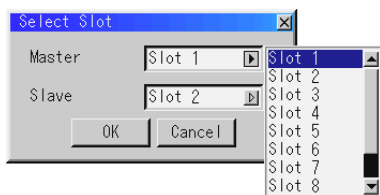
You can select the slot number from 1 to 10 of the Swicher(s) ISS-6020.

When using with a single Swicher ISS-6020:



Use the SELECT ▲ or ▼ button to select the desired slot number from 1 to 10 of the ISS-6020 Swicher and press ENTER.

When using with two or more Swicher ISS-6020:



Use the SELECT ▲ or ▼ button to select the master slot number from 1 to 10 and then the slave slot number from 1 to 10 on the Select Slot menu. Select OK and press ENTER.

To close the window without storing the settings, select Cancel and press ENTER.

### Entry List

Displays the list of the entry signals. Use the ▲▼ buttons on your remote control or the projector cabinet to select the signal and press the ENTER button on the remote control or the projector cabinet to project the image of the selected source.

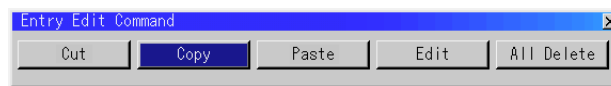


### Entry Edit Command

You can edit the signal on the entry list.

To do so:

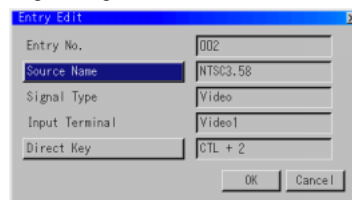
1. While pressing and holding CTL, press ENTER on the remote control to display the Entry Edit Command window.



- \* **Cut** Enables you to remove a selected signal from the list and place it on the "clipboard" in the projector.
- \* **Copy** Enables you to copy a selected signal from the list and place it on the "clipboard" in the projector.
- \* **Paste** Enables you to paste the signal placed on the "clipboard" to any other line of the list. To do this, select "Paste" and then select the line number you want to paste to. Last press ENTER.
- \* **Edit** Enables you to change source name or assign the direct key.
- \* **All Delete** This feature enables you to delete all the registered signals in the Entry List.
- \* The following buttons are not available for the currently projecting signals:

- 1) The Cut and Paste buttons on the Entry Edit Command screen
- 2) The Input Terminal button on the Entry Edit screen

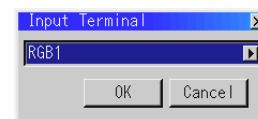
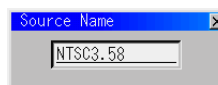
When complete, select OK and press ENTER. To exit without storing setting, select Cancel.



Select "Source Name" and press ENTER to display the Source Name Edit window. You can change source name on this window.

Select "Input Terminal" and press ENTER to display the Input Terminal window. You can change input terminal on this window.

RGB1, RGB2 and DVI DIGITAL can be selected for RGB and Component signals; Video 1/2, S-Video, RGB1 (VIDEO), RGB1 (S-VIDEO) and DVI DIGITAL can be selected for Video and S-Video signals.



Select "Direct Key" and press ENTER to display the Direct Key window. You can assign specific remote keys for direct signal input selection.

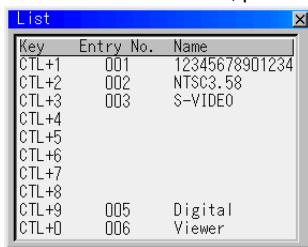
**NOTE:** Existing direct key settings are overwritten with new settings.



Select "List" and press ENTER to display the direct Key assignment list.

Select "OK" and press ENTER to close the window.

To close the List window, press CANCEL on the remote.



Selecting a new signal that is close to one of the listed signals in horizontal and vertical frequency

Selecting a new signal that is close to one of the listed signals in horizontal and vertical frequency may not display the image correctly because the new signal is considered as one of the registered signals listed in the Entry List. (In this case the Auto Adjust feature may not work correctly.)

To use both signals, use different input terminal (RGB 1 or RGB 2) respectively, or assign specific remote keys for signals.

- Cut an existing signal from the Entry List.
  - Select another signal other than the one currently projected because the currently projected signal cannot be cut.
  - Press the ENTRY LIST button on the supplied remote control.
  - After selecting the existing signal, press and hold down the CTL button and then the ENTER button simultaneously on the remote control. The Entry Edit Command window will appear. Select "Cut" and press the ENTER button.  
The selected signal will be deleted from the Entry List. (The signal data is stored in the clipboard.)
- Select the new signal and enter it in the Entry List.  
Press and hold down the CTL button and then press the ENTRY LIST button simultaneously on the supplied remote control to enter the signal in the Entry List.
- Paste the signal data that was cut and placed in the clipboard in Step 1.
  - Select a vacant line in the Entry List.
  - Press and hold down the CTL and then ENTER buttons simultaneously to display the Entry Edit Command window.
  - Select "Paste" and press the ENTER button on the remote control to add the signal to the Entry List.
- Assign the listed signals for direct keys respectively.
  - Select the one signal in the Entry List, and press and hold down the CTL and the ENTER buttons simultaneously on the remote control to display the Entry Edit Command window.
  - Select "Edit" and then press the ENTER button to display the Entry Edit screen
  - Select "Direct Key" and press the ENTER button to display the Direct Key screen.
  - Assign the signals for direct keys.

**NOTE:** Be sure not to disconnect the power cable while you are performing step 1 to 3. Failure to do so will delete the signal data stored in the clipboard. See also pages E-41 for Entry List.

## Adjust (Source)



### Picture



#### Brightness

Adjusts the brightness level or the back raster intensity.

#### Contrast

Adjusts the intensity of the image according to the incoming signal.

#### Saturation

Adjust saturation at the white peak.

#### Color

Increases or decreases the color saturation level (not available for RGB).

#### Hue

Varies the color level from +/- green to +/-blue. The red level is used as reference. This adjustment is only valid for Video and Component inputs (not available for RGB).

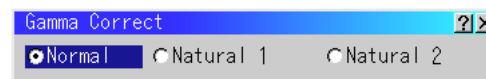
#### Sharpness

Controls the detail of the image for Video (not available for RGB and Component).

#### V-Aperture

Adjusts edge enhancement in the vertical direction. (not available for RGB)

#### Gamma Correction



Use the ◀ or ▶ button to choose "Normal" when in a lighted room and "Natural 1&2" when in a darkened room. "Natural 1" for better flesh tone; "Natural 2" for true reproduction of middle tones.

Each mode is recommended for :

- Normal ..... For the regular picture
- Natural 1 ..... For true color reproduction of natural tones
- Natural 2 ..... For dark portions of a picture

## White Balance



### Color Temperature

This feature adjusts the color temperature using the slide bar. Move the slide bar to the right to increase the color temperature for a bluish image; to the left to decrease it for a reddish image.

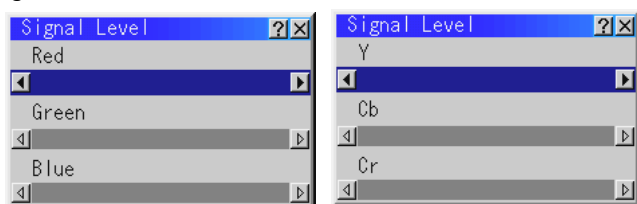
### Brightness

Brightness for each color (RGB) is used to adjust the black level of the screen.

### Contrast

Contrast for each color (RGB) to adjust the white level of the screen.

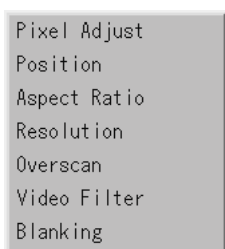
### Signal Level



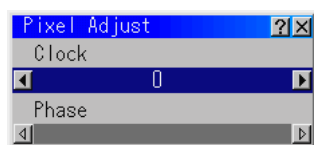
R/G/B, Y/Cb/Cr or Y/Pb/Pr Gain:

Adjust RGB, Component or HDTV Gain to match multiple projector color uniformity.

## Image



### Pixel Adjust (when Auto Adjust is off):



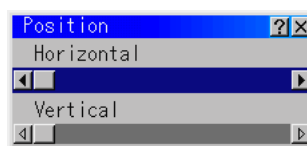
Displays the Clock and Phase adjustments.

Clock ..... Use this item with the "Auto Adjust off" to fine tune the computer image or to remove any vertical banding that might appear.

Phase ..... Use this item to adjust the clock phase or to reduce video noise, dot interference or cross talk. (This is evident when part of your image appears to be shimmering.) Use the ◀ and ▶ buttons to adjust the image.

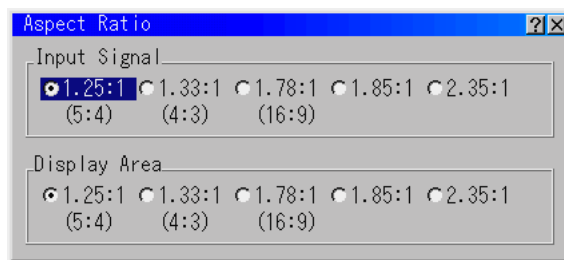
Use "Phase" only after the "Clock" is complete.

### Horizontal/Vertical Position (when Auto Adjust is off):



Adjusts the image location from left to right. This adjustment is made automatically when the Auto Adjust is turned on.

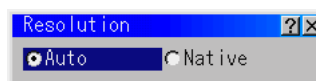
### Aspect Ratio (not available for RGB) :



You can select the aspect ratio for input signal and display area respectively. Select the appropriate aspect ratio using the SELECT ◀, ▶, ▲, or ▼ button.

*NOTE: When "Resolution" is set to "Native", this feature is not available, and the stored settings and adjustments are invalid.*

### Resolution (when Auto Adjust is off):



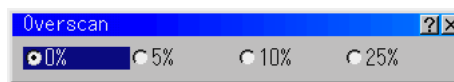
This allows you to activate or deactivate the Advanced AccuBlend feature.

Auto ..... Turns on the Advanced AccuBlend feature. The projector automatically reduces or enlarges the current image to fit the full screen.

Native ..... Turns off the Advanced AccuBlend feature. The projector displays the current image in its true resolution. See "Auto Adjust (RGB Only)" on page E-49 for turning on or off the Auto Adjust feature.

*NOTE: While you are displaying an image with higher resolution than the projector's native resolution(1366 x 1024), even when you are in the Native mode, the image is displayed full screen using the Advanced AccuBlend feature.*

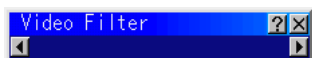
### Overscan



You can select overscan percentage for RGB signal. Select the appropriate option using the SELECT ◀ or ▶ button.

*NOTE: When "Resolution" is set to "Native", this feature is not available, and the stored settings and adjustments are invalid.*

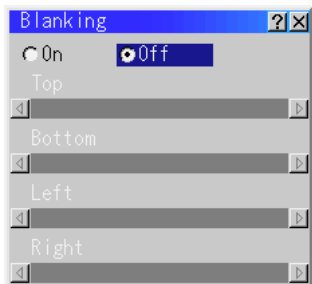
## Video Filter



This feature reduces video noise. Select the appropriate filter for your signal.

Bar 0 ..... Off  
Bar 1/3 ..... High  
Bar 2/3 ..... Medium  
Bar full ..... Low

## Blanking



This feature allows you to mask any unwanted area of the screen image.

### Blanking On/Off:

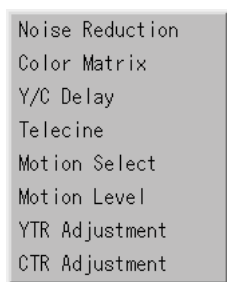
This setting enables or disables the blanking function.

On ..... Blanking function is enabled.  
Off ..... Blanking function is disabled.

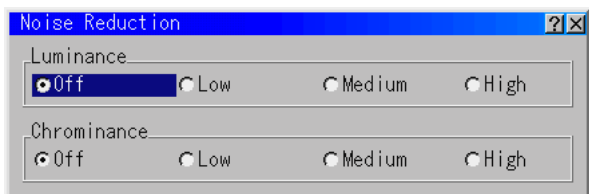
\* Adjustment of vertical display range

Adjust the Top, Bottom, Left or Right blanking with the SELECT ◀ or ▶ button.

## Video Adj



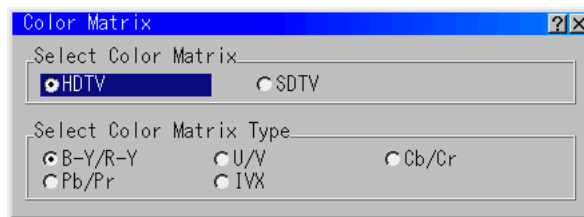
## Noise Reduction



Select one of the following three levels for reducing video noise. Low, Medium or High.

*NOTE: The lower the Noise Reduction level, the better the image quality. Increasing Noise Reduction lowers video bandwidth.*

## Color Matrix



First, select an appropriate color matrix for your input signal, either HDTV or SDTV. Then select an appropriate matrix type from B-Y/R-Y, Cb/Cr, Pb/Pr or IVX.

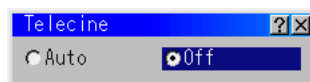
*NOTE: The Color Matrix feature is available for component video signal only.*

## Y/C Delay (not available for RGB)



Adjusts Y/C delay level.

## Telecine



Use 3:2 pull down correction to eliminate jitter and artifacts in video.

Auto ..... For film source such as a DVD player  
Off ..... For signals other than film sources

## Motion Select:



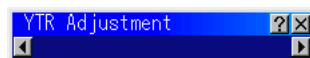
Sets the interpolation method. Selects Still or Adaptive. Still is used for non moving images such as a document camera. Select Adapter for all motion video.

## Motion Level



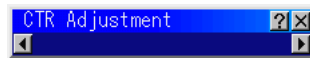
Adjusts level of motion detection when Adaptive is selected.

## YTR Adjustmen (not available for RGB)



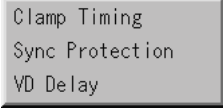
Adjusts luminance transient time.

## CTR Adjustment (not available for RGB)

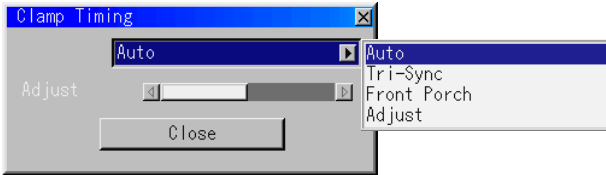


Adjusts chroma transient time.

## Option Adj



### Clamp Timing:

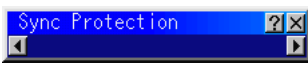


According to the signal, this function sets the detection position (i.e., clamp position) of the black level reproduction of the analog input signal. Normally this is not used. (1080P is set as the default)

- Auto ..... This is the normal setting.
- Tri-Sync ..... This is set when projecting HDTV video.
- Front Porch .. This is set when the picture quality does not improve even though Auto or Tri-Sync has been set.
- Adjust ..... This permits the video clamp position for each signal to be set. Use "Adjust" when a clamp timing error occurs at the time of special analog signal reception such as 1080P. Note that "Adjust" is not valid for doubler signals such as NTSC and PAL.

To delete the "Clamp Timing" setting screen, select the SELECT ▼ button and press the ENTER button, or press the remote control CANCEL button.

### Sync Protection



When a VCR, DVD, or some other equipment that supports Copyguard (a copy prevention system) is played back, the screen may be displayed in a curved manner. Adjustments are made in such circumstances. Use the SELECT ◀ or ▶ button to adjust the VD level.

### VD Delay



This feature is used to correct vertical jitter of non-standard interlaced signal.

**NOTE:** When connecting with a scan converter:  
If an image from the scan converter is not correctly displayed, adjust to select the best level point so that the image is displayed correctly.

### Signal Type



Select either the RGB signal type or the Component signal type.

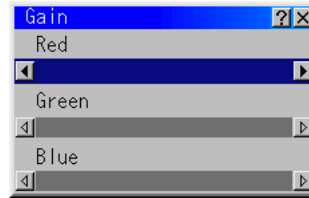
- RGB ..... RGB signal
- Component .. Composite signals such as YCbCr/YPbPr

**NOTE:** This feature is available on RGB 1 and 2 only.

## Switcher (available only when used with ISS-6020)



### Switcher Gain



This feature adjusts the input level of the signal. This must be done to each color:R, G, and B.

### Switcher Volume



This feature adjusts the volume of the audio output. Adjust the sound corresponding to the slot.

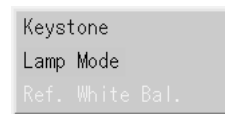
## Volume



Adjusts the sound level of the projector.

**NOTE:** You can also display the volume bar without opening the menu. See "Volume Bar (Direct Button)" on page E-48 for more details.

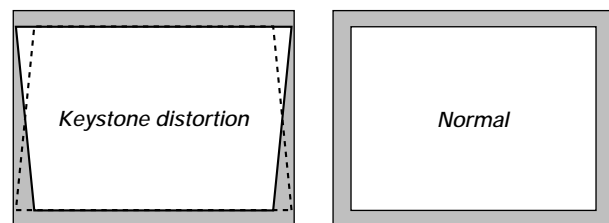
## Ref Adj



### Keystone



This feature corrects the keystone (trapezoidal) distortion to make the top of the screen longer or shorter to be the same as the bottom. Use the ◀ or ▶ buttons on the slide bar to correct the keystone (trapezoidal) distortion.



Continued on next page.

**NOTE:**

- 1) With the projector aimed directly at the screen the maximum keystone angle that can be corrected is +/-30 degrees for RGB signal and +/-15 degrees for the other signals.
- 2) When "Resolution" is set to "Native", this feature is not available, and the stored settings and adjustments are invalid.  
Depending on the type of graphics being used, the picture may get blurred or keystone correction may not be possible when excessive keystone correction is used.  
The idea is, the closer you are to native resolution, the better image you will see.

**NOTE:** The keystone feature is not available when the test pattern or the blue back is displayed.

### Lamp Mode



This feature enables you to select two brightness mode of the lamp: Normal and Eco modes. The lamp life can be extended up to 2000 hours by using the Eco mode.

- Normal Mode ..... This is the default setting.
- Eco Mode ..... Select this mode to increase the lamp life.

**NOTE:** If you have selected the Eco mode, the lamp lights in Normal mode for 3 minutes after the projector is turned on. After 3 minutes the lamp will change to Eco mode.

### Reference White Balance

This feature adjusts the white balance that is used as a reference. This adjustment affects all sources. The Ref.White Bal. is available for test pattern only.

### Factory Default



Returns all adjustments and settings to the factory preset level.

All Data ..... Reset all the settings for all the signals to the factory preset.

**NOTE:** The items that can be reset are all the settings and adjusts except for Language, Projcgtor ID, Lamp Hour Meter, Filter Usage, Projector Usage and Communication Speed.

Including Entry List  
Also deletes all the signals in the Entry List and returns to the factory preset.

Current Signal ..... Resets the adjustments for the current signal to the factory preset levels.

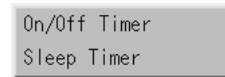
**NOTE:** All the items in "Adjust (Source)" can be reset.

## Projector Options



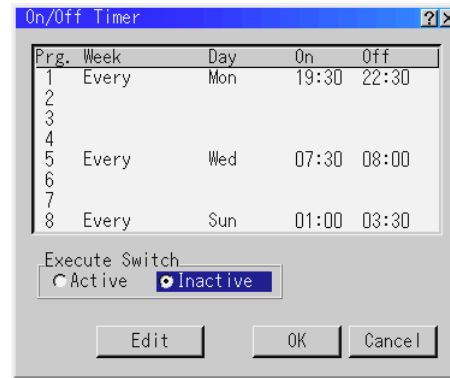
Enables you to set preferences and other operating options.

### Timer



Enables you to turn on or off your projector automatically at a specified time. Two timer functions are available: On/Off Timer and Sleep Timer.

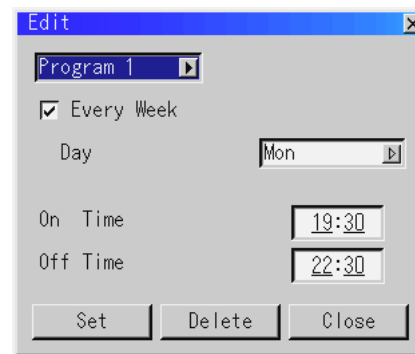
### On/Off Timer



Up to eight settings can be programmed.

- Before setting On/Off Timer, make sure that Date, Time Preset feature is set.
- Even after setting On/Off Timer, turning the projector on or off with the remote control is possible.
- There are two time display formats: 24-hour or AM/PM format.

1. Open the On/Off Timer window.
2. Select EDIT and press ENTER on the remote control to open the EDIT window.



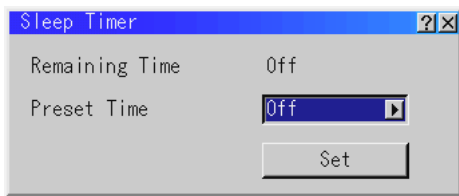
3. Set the Week, Day, On-Time and Off-Time using the Select buttons and Source buttons (1 thru 10). To cancel the on-time or off time, use Delete.
4. Select Set and press the ENTER button on the remote control to complete the setting. To close, select Close.



- To enable your setting, select Active on the Execute Switch.
- Select OK and press the ENTER button on the remote control to complete the setting.

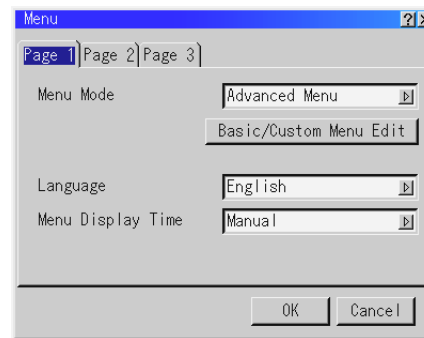
**NOTE:** When On Timer is set and the projector is in the standby mode, the Status indicator flashes green to show that On Timer program is active. The projector must be in stand-by mode at the time of turning on. The preset power-on time will be void if the cooling fan is working or an error occurs. Unplugging the projector cancels your 1 Week programs regardless of whether the program was executed or not. However, your Every Week program will not be cancelled even if you unplug the projector.

### Sleep Timer



- Select your desired time between 30 minutes and 2 hours in 30 minute increments.
- Select Set and press the ENTER button on the remote control.
- The remaining time starts counting down.
- The projector will turn off after the countdown is complete.

### Menu [Page 1]



Allows you to set preferences for the on-screen menu. Press "OK" to save your changes for all the features.

#### Menu Mode:

This feature allows you to select two menu modes: Advanced Menu and Basic/Custom Menu.

- Advanced Menu ..... This is the menu that contains all the available menus and commands.
- Basic/Custom Menu .... This is the menu that you can customize using the Basic/Custom Menu Edit to fit your needs.

The factory default Basic/Custom menu includes:

Source Select (RGB1/2, DVI DIGITAL, Video1/2, S-Video and Entry List), Brightness, Contrast, Pixel Adjust and Position. See page E-36 for instructions about how to customize the Basic/Custom Menu.

#### Language:

You can choose one of seven languages for on-screen instructions. The options are: English, German, French, Italian, Spanish, Swedish and Japanese.

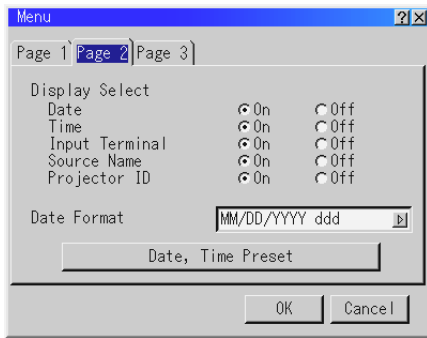
#### Menu Display Time :

This option allows you to select how long the projector waits after the last touch of a button to turn off the menu.

The preset choices are "Manual", "Auto 5 sec", "Auto 10 sec", and "Auto 30 sec". The "Manual" is the factory preset.

- Manual ..... The menu can be turned off manually.
- Auto 5 sec .... The menu will automatically be turned off in 5 seconds if no buttons are pressed within 5 seconds.
- Auto 10 sec .. The menu will automatically be turned off in 10 seconds if no buttons are pressed within 10 seconds.
- Auto 30 sec .. The menu will automatically be turned off in 30 seconds if no buttons are pressed within 30 seconds.

[Page 2]



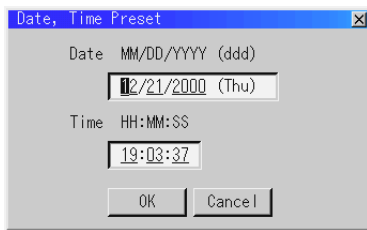
**Display Select:**

You can choose the desired status information to be displayed on the screen. The desired status information will be displayed each time you switch between sources.

**Date Format:**

Eight display formats can be selected. This date format sets the current date that appears on the upper left corner of the screen.

**Date, Time Preset:**



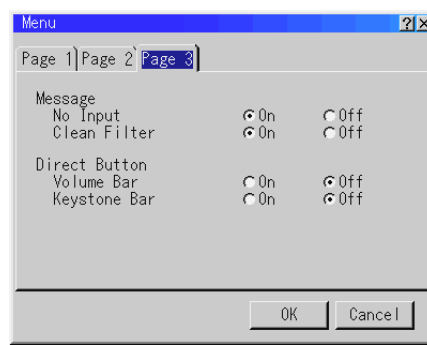
**Setting the Current Date and Time**

You can set the current time, month, date, and year.

1. Type in date.  
Enter month, date and year in this order using INPUT buttons on the remote control.  
Month and date must be entered in two digits. For example, to display "February", press "0" and "2".
2. Type in time.  
Time is expressed in the 24-hour format. For example, 6:00 p.m. is entered as 18:00.
3. Select "OK" and press ENTER.  
Closing the window allows the clock to start.  
The current year, month, date and time are displayed on the top of the screen.

**NOTE:** The projector has a built-in clock. The clock will keep working for about 3 days after the main power is turned off. If the main power is off for 3 days or more, the built-in clock will be reset. If the built-in clock is reset, set the date and time again. The built-in clock will not reset while in the standby condition.

[Page 3]



**Message:**

You can choose the desired information to be displayed on the screen.

**No Input:** This option turns on or off the "No Input" message to be displayed in the top right corner on the screen.

On ..... The message will be displayed.

Off ..... The message will not be displayed.

**Clean Filter:** This option turns on or off the "Please clean the filters" message each time you turn on the projector if the projector has been used in excess of 100 hours of use.

On ..... The message to clean the filters will be displayed.

Off ..... The message will not be displayed.

See page E-53 for cleaning the filters. After cleaning the filters, reset the filter usage back to zero.

To reset the filter usage, see page E-50.

**Direct Button:**

**Volume Bar:** This option turns on or off the volume bar when you adjust the sound volume using Select ▲▼ button on the remote control.

On ..... You can increase or decrease the sound volume with the volume bar on screen.

Off ..... You can increase or decrease the sound volume without having to use the volume bar.

**Keystone Bar:** This option is available on the optional remote control only. This option turns on or off the keystone bar when you adjust the keystone using KEYSTONE +/- button on the optional remote control.

On ..... You can increase or decrease the level with the keystone bar on screen.

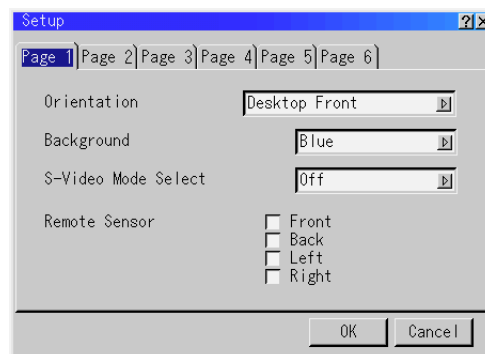
Off ..... You can increase or decrease the level without having to use the keystone bar.

**Setup**

Enables you to set operating options.

Press "OK" to save your changes for all the features of Page1, Page2, Page3, Page 4, Page5 and Page 6.

[Page 1]



**Orientation**

This reorients your image for your type of projection. The options are: desktop front projection, ceiling rear projection, desktop rear projection, and ceiling front projection.

**Background**

Use this feature to display a blue/ black screen or logo when no signal is available. The default background is blue.

**S-Video Mode Select**

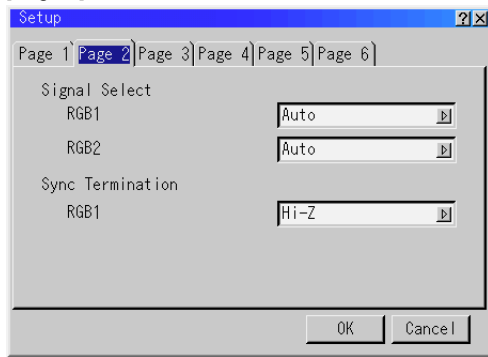
This feature is used to select the S-Video signal detection mode. This allows identifying of the S-Video signals with different aspect ratio (Zoom signal 16:9, Wide Zoom signal 4:3).

- S2 ..... Identifies Zoom or Wide Zoom signal.
- OFF ..... Does not identify any S-video signal.

**Remote Sensor**

This option determines which remote sensors on the projector are enabled in wireless mode. The options are: front, rear, right, or left. All checked boxes indicate that they can accept the infrared signal from the remote control.

[Page 2]



**Signal Select (RGB1/2)**

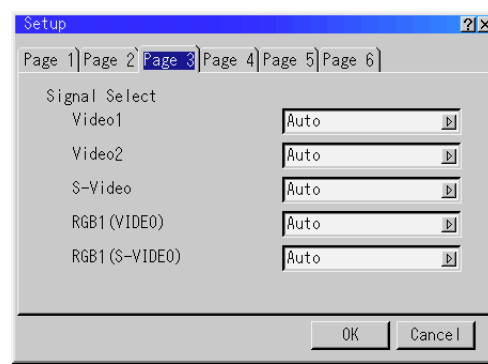
Allows you to choose "RGB" for an RGB source such as a computer, or "Component" for a component video source such as a DVD player. Normally select "Auto" and the projector automatically detects a component signal. However there may be some component signals that the projector is unable to detect. If this is the case, select "Component".

**Sync Termination (RGB1)**

This functions is used to select the impedance of the sync signal. Select "75 Ω" or "Hi-Z".

*NOTE: The default setting is "75Ω". This should be "75Ω" for normal use. Select the "Hi-Z" when inputting a TTL signal.*

[Page 3]



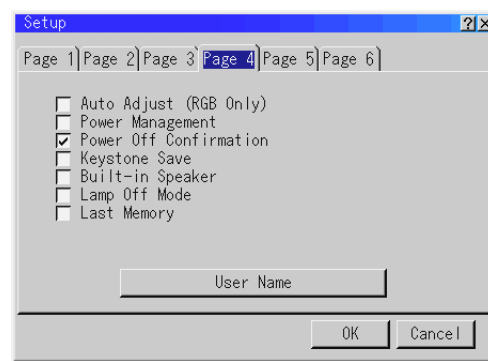
**Signal Select (VIDEO 1/2 and S-VIDEO)**

This feature enables you to select composite video standards manually. Normally select "Auto". Select the video standard from the pull-down menu. This must be done for Video and S-Video separately.

**Signal Select (RGB Connector)**

Allows you to choose "VIDEO" or "S-VIDEO" for RGB1 connector. Normally select "Auto".

[Page 4]



**Auto Adjust (RGB Only)**

When "Auto Adjust" is turned on, the projector automatically determines the best resolution for the current RGB input signal to project an image using NEC's Advanced AccuBlend Intelligent Pixel Blending Technology.

The image can be automatically adjusted for position and stability; "Horizontal Position", "Vertical Position" and "Clock".

- On ..... Automatically adjusts image display functions ( "Horizontal Position", "Vertical Position" and "Clock".)
- Off ..... User can adjust the image display functions ( "Horizontal Position", "Vertical Position" and "Clock") manually.

*NOTE: The projector has a feature that enters a signal automatically in the Entry List once you made any adjustments. However, this feature is not available if you adjust a signal using the Auto Adjust feature. To register the signal after you use the Auto Adjust feature, first you need to make any one adjustment manually.*

## Power Management

When this option is on and there is no RGB input for five minutes or more, the projector will automatically turn itself off.

## Power Off Confirmation

This option determines whether a confirmation dialog for turning off the projector will appear or not.

## Keystone Save

This option enables you to save your current keystone settings. Saving your change once affects all sources. The changes are saved when you turn off the projector.

## Built-in Speaker

This option allows you to activate the built-in speakers when you connect an audio cable to the AUDIO OUT terminal.

## Lamp Off Mode

Turning on this option allows a signal to be passed through to the Monitor Output connector during standby condition. This is available for an RGB signal only.

## Last Memory

The projector stores the last signal data in memory for each input (RGB1, RGB2, DVI DIGITAL, Video, and S-Video).

This feature will reduce switching time between sources.

If a commercially available switcher is connected, turning on this feature may cause the image to appear incorrectly. Should this happen, turn this feature off to mute the screen during switching.

Normally if this feature is turned on when the projector is used in standalone mode, switching time between sources will be shortened.

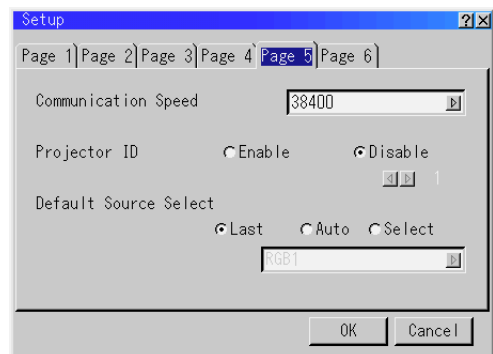
## User Name

Type in your desired name using the INPUT buttons on the remote control.

Select one character at a time with the INPUT buttons 1 through 10(0) and by moving the cursor with the SELECT button. The user name must be 18 characters or less.

Only after completely finishing the selection of the characters, press ENTER.

[Page 5]



## Communication Speed

This feature sets the baud rate of the PC CONTROL connector (Mini D-Sub 9 Pin).

It supports data rates from 4800 to 38400 bps.

The default is 38400 bps. Select the appropriate baud rate for your equipment to be connected.

## Projector ID

Each projector needs its own unique addresses when used in serial communication mode. You can choose one of 64 unique addresses using the spin box. First select Enable. Keep pressing ► button increases the number.

To make your setting available, select OK.

## Default Source Select

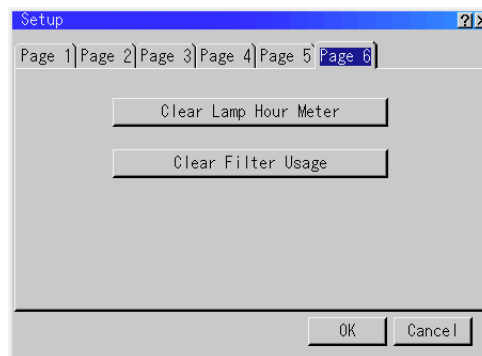
You can set the projector to default to any one of its inputs each time the projector is turned on.

Last ..... Sets the projector to default to the previous or last active input each time the projector is turned on.

Auto ..... Searches for an active source in order of RGB1 → RGB2 → DVI DIGITAL → Video 1 → Video 2 → S-Video → RGB1(Standalone) and displays the first found source. Searching order in SW1 Level: from Slot 1 to 10

Select ..... Displays the selected source input every time the projector is started up. Select an input from the pull-down menu.

[Page 6]



## Clear Lamp Hour Meter:

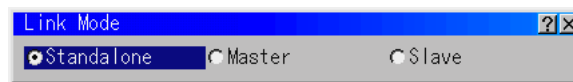
Resets the lamp clock back to zero. Pressing this button appears a confirmation dialog box. To reset the lamp usage hour, press "OK".

**NOTE:** The projector will turn off and go into standby mode after 1600 hours (up to 2100 hours in Eco mode) of service. If this happens, press the "Help" button on the remote control for 10 seconds to reset the lamp clock back to zero. Do this only after replacing the lamp.

## Clear Filter Usage:

Resets the filter usage back to zero. Pressing this button appears a confirmation dialog box. To reset the filter usage hour, press "OK".

## Link Mode



This feature is used for multiple projector connection using DVI Digital Input/Output connectors. The master projector is set to Master.

The other slave projectors are set to Slave. When not using Link mode, set to Standalone. See page E-16 for setting up for double stacking in link mode.

## Switcher Control



This feature sets the projector in communication with the NEC ISS-6020 Switchers.

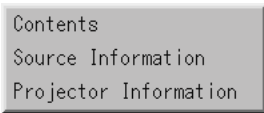
- Stand Alone ..... Use the projector in stand alone operation.
- SW 1 Level ..... Use the projector with one Switcher. (not available in Link mode)
- SW 2 Level ..... Use the projector with two or more Switchers. (not available in Link mode)



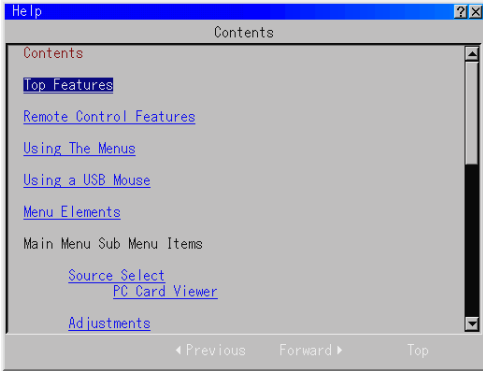
When changing this setting, the confirmation message will appear. If you want to restart your projector, select Yes; if not, select No.

**NOTE:** This setting becomes effective only after the projector is restarted.

## Help



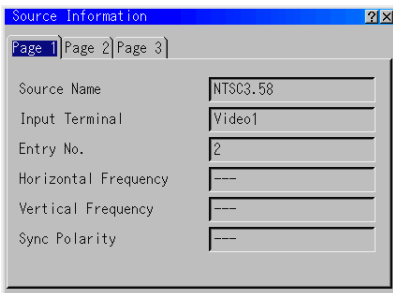
## Contents



Provides an online help about how to use the menus. An underlined link means that you can move to an adjustment item directly. Selecting the underlined link and pressing ENTER moves to the corresponding adjustment item.

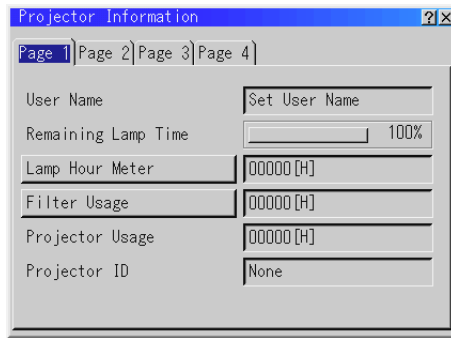
**NOTE:** The Help Menu may not be displayed correctly when a UXGA signal is displayed.

## Source Information



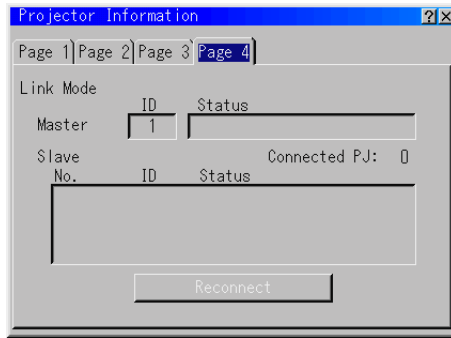
Displays the status of the current signal. This dialog box has three pages.

## Projector Information



Displays the information for your projector such as lamp usage, serial number and version number etc..

[Page 4]



### Link Mode

Displaying Current Status of Link Mode

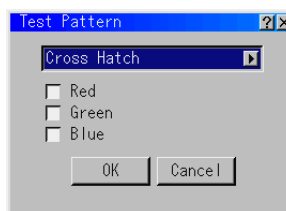
When selecting the tab "Page 4", you will get the following dialog box.

- Master ID ..... Indicates the Master projector
- Status ..... Indicates the status of the master projector
- Connected PJ ..... Indicates number of connected slave projectors
- Slave No ..... Indicates serial number of the slave projector
- ID ..... Indicates ID of a slave projector
- Status ..... Indicates the status of the slave projector
- Page buttons ◀ ▶ ..... Turns pages. One screen displays information of 3 projectors only. Information of a maximum of 16 projectors can be displayed using these page buttons.
- Reconnect button ..... Confirms connection of all linked projectors

### Status items:

- Running ..... The projector is now working
- Cooling Lamp ..... The fan is now cooling the lamp
- Standby ..... The projector is in stand-by
- Communication Error . . . A communication error has occurred
- Connecting ..... The projector is now verifying for connection
- Error Standby ..... An error caused the projector to enter the stand-by mode.

## Test Pattern



Press to display the test pattern. Pressing this button sequentially selects six test patterns.

# 6. MAINTENANCE

This section describes the simple maintenance procedures you should follow to replace the lamp and clean the filter.

## Replacing the Lamp

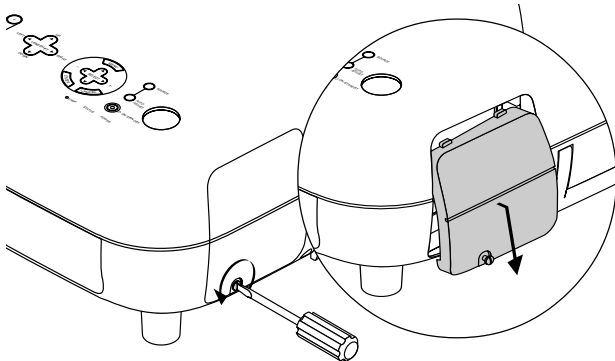
After your lamp has been operating for 1500 hours (2000 hours : Eco mode) or longer, the "Status" indicator in the cabinet will go on and the message will appear. Even though the lamp may still be working, replace it at 1500 (up to 2000 hours : Eco mode) hours to maintain optimal projector performance.

### CAUTION

- DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off, wait three minutes, and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.
- DO NOT REMOVE ANY SCREWS except the lamp cover screw and two lamp housing screws. You could receive an electric shock.
- The projector will turn off and go into stand by mode after 1600 (2100 hours : Eco mode) hours of service. If this happens, be sure to replace the lamp. If you continue to use the lamp after 1500 hours (2000 hours : Eco mode) of use, the lamp bulb may shatter, and pieces of glass may be scattered in the lamp housing. Do not touch them as the pieces of glass may cause injury. If this happens, contact your NEC dealer for lamp replacement.

To replace the lamp:

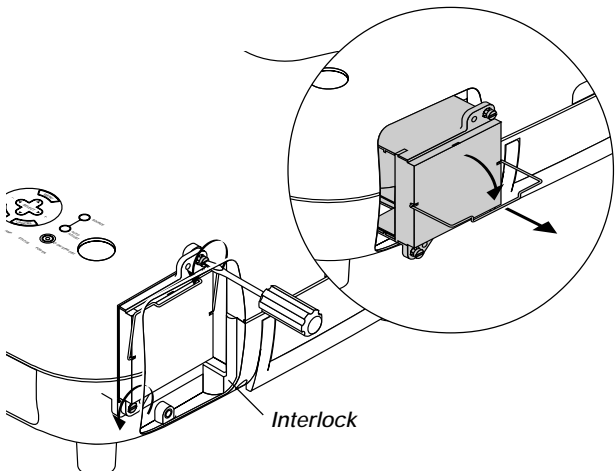
1. Loosen the lamp cover screw until the screwdriver goes into a freewheeling condition and remove the lamp cover. The lamp cover screw is not removable.



2. Loosen the two screws securing the lamp housing until the screwdriver goes into a freewheeling condition. The two screws are not removable.

Remove the lamp housing by pulling out the handle.

**NOTE:** There is an interlock on this case to prevent the risk of electrical shock. Do not attempt to circumvent this interlock.

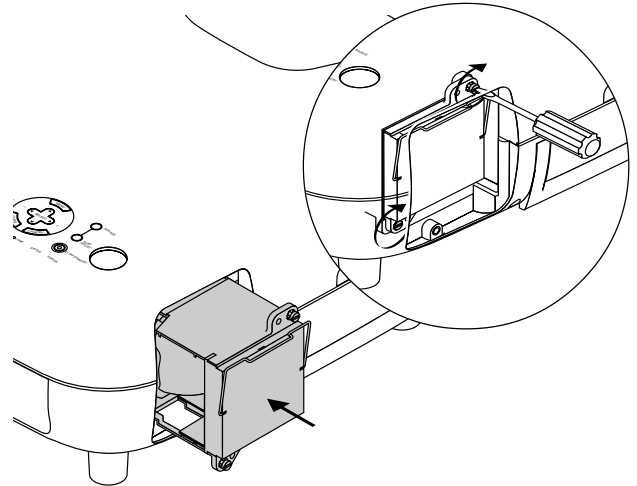


3. Insert a new lamp housing until the lamp housing is plugged into the socket.

**CAUTION:** Do not use a lamp other than the NEC replacement lamp (GT50LP). Order this from your NEC dealer.

Secure it in place with the two screws.

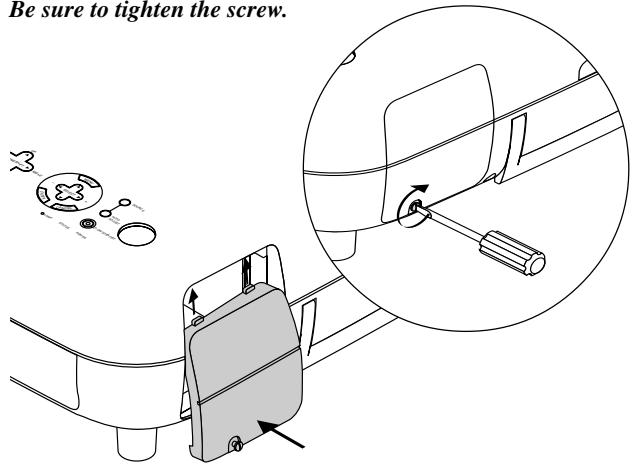
**Be sure to tighten the screws.**



4. Reattach the lamp cover.

Tighten the lamp cover screw.

**Be sure to tighten the screw.**



5. After you install a new lamp, select [Projector Options] → [Setup] → [Page 6] → [Clear Lamp Hour Meter] to reset the lamp usage hours.

**NOTE:** When the lamp exceeds 1600 hours (2100 hours : Eco mode) of service, the projector cannot turn on and the message is not displayed. If this happens, press Help button on the remote control for a minimum of 10 seconds while in standby mode. When the lamp time clock is reset to zero, the STATUS indicator goes out.

## Cleaning or Replacing the Filter

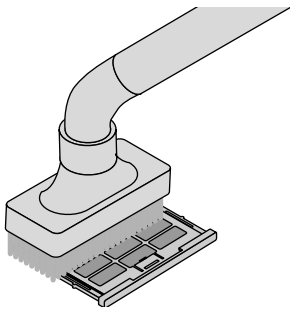
The air-filter sponge keeps the inside of the MultiSync GT2150 Projector free from dust or dirt and should be cleaned after every 100 hours of operation (more often in dusty conditions). If the filter is dirty or clogged, your projector may overheat.

### CAUTION

- Turn off the power, wait for three minutes, and unplug the projector before replacing the filter.
- Only clean the outside of the filter with a vacuum cleaner.
- Do not attempt to operate the projector without filter.
- Your projector will not operate unless the filter is installed correctly.

### To clean the filter:

Pull out the filter by pushing up on the catch. Vacuum the filter-through the filter.



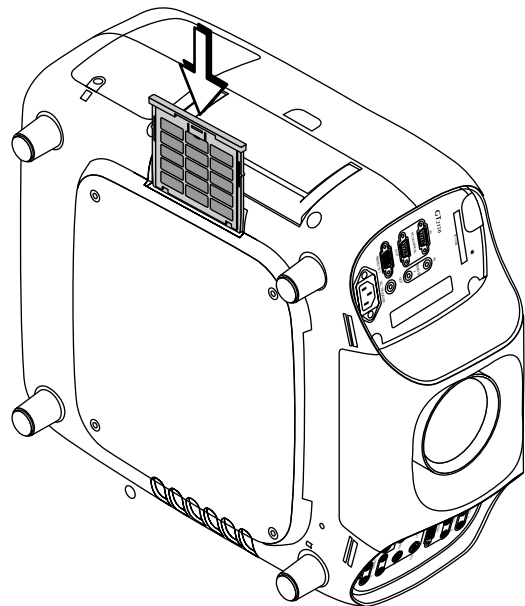
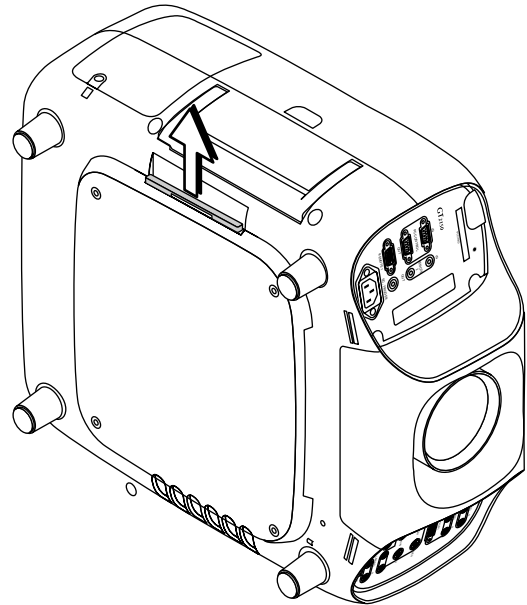
The "Please clean the filters" message will be displayed each time the projector is turned on after it has been used in excess of 100 hours. Should this message appear, clean the filters.

### NOTE:

- \* The message can be turned on or off using the "Message" - "Clean Filter" option on the Setup menu. See page E-48.
- \* After cleaning the filters and resetting the filter usage time back to zero, the message will not be displayed. See page E-50 for resetting the filter usage time.

### To replace the filter:

1. Pull out the filter by pushing up on the catch.



2. Reinstall the new filter.

**NOTE:** Do not detach the sponge from the filter. Do not wash the filter with soap and water. Soap and water will damage the the filter membrane. Before replacing the filter cover, remove dust and dirt from the projector cabinet. Keep out dust and during filter replacement.

3. After you install a new filter, select [Projector Options] → [Setup] → [Page 6] → [Clear Filter Usage] to reset the filter usage hours.

Cette section décrit les procédures simples d'entretien que vous devez suivre pour remplacer la lampe, nettoyer ou remplacer le filtre.

## Remplacement de la lampe

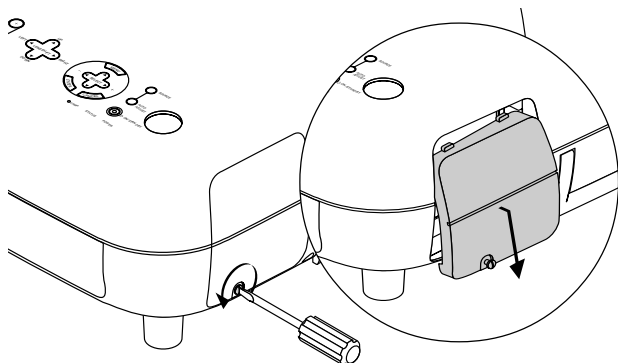
Après que votre lampe ait fonctionné pendant 1500 heures (2000 heures : mode Eco) ou plus, le voyant "Status" du coffret s'allume. Même si la lampe peut encore fonctionner, remplacez-la au bout de 1500 heures (2000 heures : mode Eco) pour conserver une performance optimale de votre projecteur.

### ATTENTION

- NE TOUCHEZ PAS A LA LAMPE juste après qu'elle ait été utilisée. Elle est très chaude. Eteignez le projecteur laissez au moins trois minutes d'intervalle après avoir éteint le projecteur et débranchez le câble d'alimentation. Laissez la refroidir pendant au moins une heure avant de la manipuler.
- NE RETIREZ PAS LES VIS excepté la vis du couvercle de la lampe et deux vis du coffret de la lampe. Une décharge électrique pourrait en résulter.
- Le projecteur s'éteint et entre en mode d'attente après 1600 heures (2100 heures : mode Eco) de service. Dans ce cas, remplacez la lampe. Si vous continuez à utiliser la lampe après 1500 heures (2000 heures : mode Eco) d'utilisation, l'ampoule de la lampe risque d'éclater, et des bris de glaces risquent d'être dispersés dans le boîtier de la lampe. Ne les touchez pas car elles peuvent vous blesser. Dans ce cas, contactez votre revendeur NEC afin de procéder au remplacement de la lampe.

Pour remplacer la lampe:

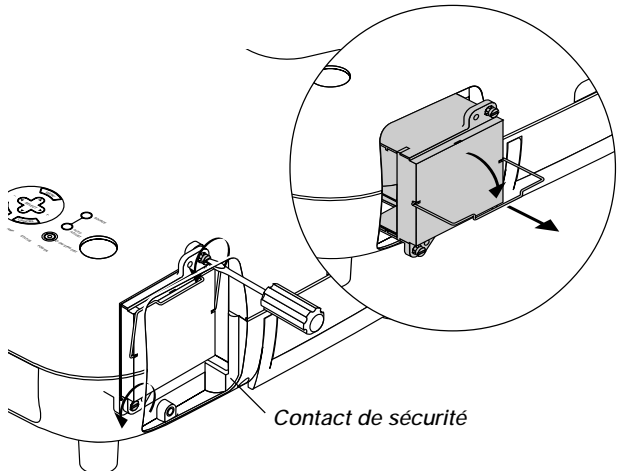
1. Dévissez la vis du couvercle de la lampe jusqu'à ce que le tournevis tourne librement et retirez le couvercle de la lampe. La vis du couvercle de la lampe ne peut pas être retirée.



2. Dévissez les deux vis fixant le coffret de la lampe jusqu'à ce que le tournevis tourne librement. Les deux vis ne peuvent pas être retirées.

Retirez le coffret de la lampe en tirant la poignée.

**REMARQUE:** Il y a un contact de sécurité sur le boîtier pour éviter le risque d'électrocution. N'essayez pas de contourner ce contact de sécurité.

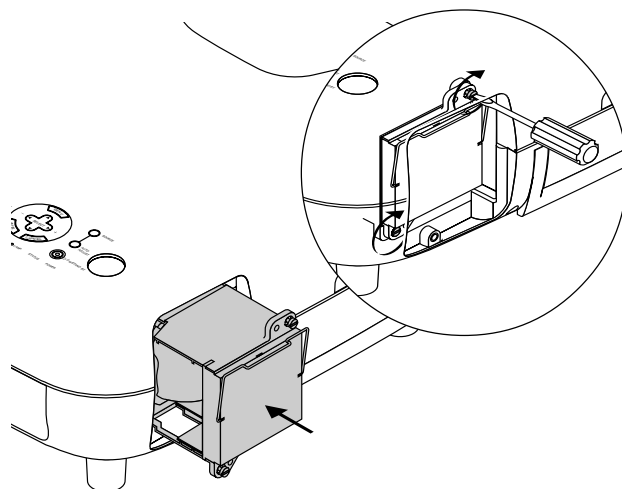


3. Insérez un coffret de lampe neuve dans la prise.

**ATTENTION:** N'utilisez pas une lampe autre que la lampe de remplacement NEC (GT50LP). Commandez-la de votre revendeur NEC.

Fixez-le à l'aide de deux vis.

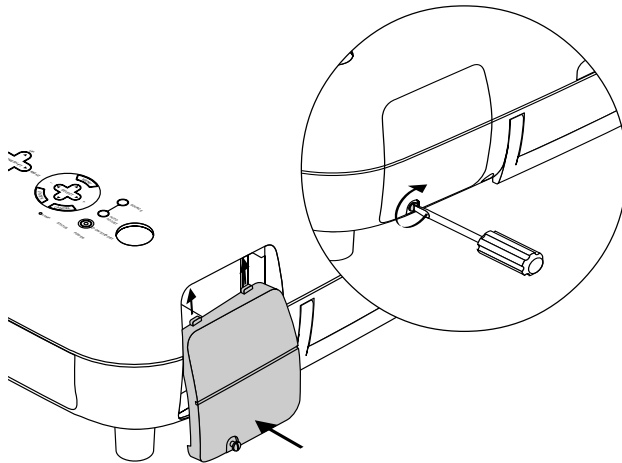
Assurez-vous de visser les deux vis.



4. Refixez le couvercle de la lampe.

Serrez la vis du couvercle de la lampe.

Assurez-vous de visser la vis du couvercle de la lampe.



5. Après avoir installé une lampe neuve, sélectionnez [Options du Projecteur] → [Réglage] → [Page 6] → [Durée d'utilisation lampe] pour remettre le compteur d'heures d'utilisation de la lampe à zéro.

**REMARQUE:** Si la lampe a servi pendant plus de 1600 heures (2100 heures : mode Eco), le projecteur ne peut pas être allumé et le menu n'est pas affiché. Si cela se produit, appuyez sur le bouton HELP sur la télécommande pendant au moins 10 secondes pendant le mode de veille. Lorsque le compteur de durée d'utilisation de la lampe est remis sur zéro, le témoin STATUS disparaît.



## Nettoyage ou remplacement du filtre

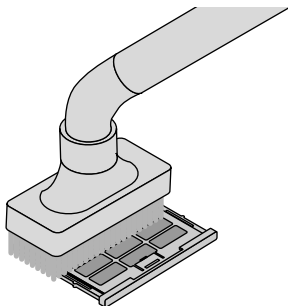
Le coussin éponge du filtre à air maintient l'intérieur du projecteur GT2150 à l'abri de la poussière ou de la saleté et doit être nettoyé toutes les 100 heures d'utilisation (plus souvent dans les endroits poussiéreux). Si le filtre est sale ou bouché, le projecteur risque de surchauffer.

### PRECAUTION

- Coupez l'alimentation et débranchez le projecteur avant de remplacer le filtre.
- Nettoyez uniquement le couvercle extérieur du filtre avec un aspirateur.
- N'essayez pas de faire fonctionner le projecteur sans filtre.
- Votre projecteur à affichage à cristaux liquides ne fonctionnera pas tant que le filtre ne sera pas installé correctement.

Pour nettoyer le filtre à air:

Aspirez le filtre à travers le couvercle de filtre.



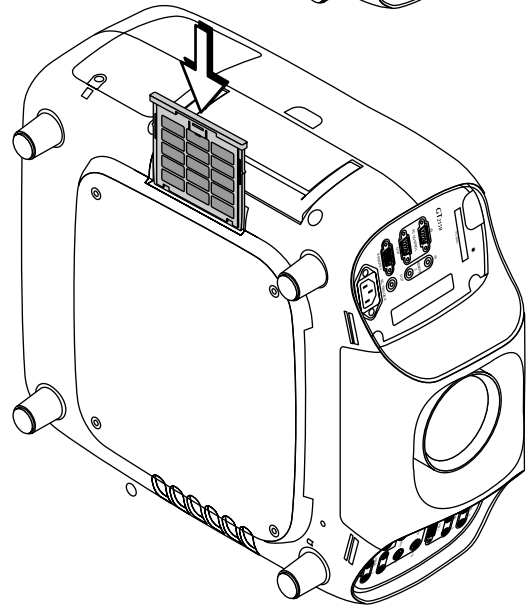
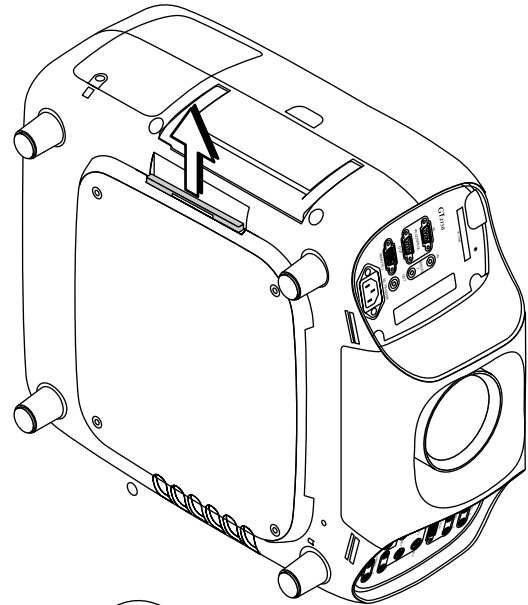
The "Please clean the filters" message will be displayed each time the projector is turned on after it has been used in excess of 100 hours. Should this message appear, clean the filters.

### REMARQUE:

- \* Ce message peut être activé ou désactivé en utilisant l'option "Message" - "Nettoyer les filtres" du menu de configuration (Setup). Voir page E-48.
  - \* Après le nettoyage des filtres et remise à zéro du temps d'utilisation des filtres, le message ne s'affichera plus.
- Voir page E-50 pour la remise à zéro du temps d'utilisation des filtres.

Pour remplacer le filtre à air:

1. Retirez-vous le le filtre en poussant au-dessus sur la prise.



2. Réinstallez le panneau du filtre.

**REMARQUE:** Ne détachez pas le coussin éponge du couvercle de filtre. Ne lavez pas le filtre au savon et à l'eau. Le savon et l'eau endommageront la membrane du filtre. Avant de remplacer le filtre à air, dépoussiérez et nettoyez le coffret du projecteur. Maintenez propre pendant le remplacement du filtre.

3. Après avoir installé un filtre neuve, sélectionnez [Options du Projecteur] → [Réglage] → [Page 6] → [Pour effacement filtre] pour remettre le compteur d'heures d'utilisation de le filtre zéro.

# 7. TROUBLESHOOTING

This section helps you resolve problems you may encounter while setting up or using the projector.

## Power/ Status Light Messages

Condition		Power Indicator	Status Indicator	Note
Standby	Normal	Steady orange	–	–
	ON-Timer setting	Steady orange	Blinking green (4 sec interval)	On Timer is active
Cooling down		Blinking green	–	Blinks green for 60 seconds
Lamp in Normal mode		Steady green	–	–
Lamp in Eco mode		Steady green	Steady green	–
3 minutes after lamp is turned on in Eco mode		Steady green	Blinking green	Fixed at Normal mode. Lamp mode can be changed on the menu
Lamp has reached its end of life (1500 hours or over)		Steady green	Steady red (Normal mode)/ Steady orange (Eco mode)	Message appears on screen during 1500-1600 hours of lamp usage. The projector reaches its end of life. Please replace the lamp as soon as possible.
Lamp life has reached its end of life (1600 hours or over)		Steady orange	Steady red	The projector is in standby mode and cannot be turned on.
Lamp cover, filter cover or lens holder error (3 locations)		Steady orange	Blinking red (1 sec interval)	The projector is in standby mode and cannot be turned on.
Temperature error		Steady orange	Blinking red (4 sec interval)	The projector is in standby mode and cannot be turned on.
Fan error		Steady orange	Blinking red (8 sec interval)	The projector is in standby mode and cannot be turned on.
Lamp error		Steady orange	Blinking red (12 sec interval)	The projector is in standby mode and cannot be turned on.

## Lamp Light Messages

Lamp Remaining Time	Indicator
100 – 50%	Steady green
50 – 25%	Steady orange
25 – 0%	Steady red

## Common Problems & Solutions

Problem	Check These Items
Does not turn on	<ul style="list-style-type: none"> <li>Check that the power cable is plugged in and that the power button on the projector cabinet or the remote control is on.</li> <li>Ensure that the lamp cover is installed correctly. See page E-52 or E-54.</li> <li>Check to see if the projector has overheated or the lamp usage exceeds 1600 hours (2100 hours in Eco mode). If there is insufficient ventilation around the projector or if the room where you're presenting is particularly warm, move the projector to a cooler location.</li> </ul>
No picture	<ul style="list-style-type: none"> <li>Use the menu to select your source (Video1/2, S-Video, RGB1/2 or DVI DIGITAL). See page E-41.</li> <li>Ensure your cables are connected properly.</li> <li>Use menus to adjust the brightness and contrast. See page E-42.</li> <li>Remove the lens hood cap.</li> <li>Reset the settings or adjustments to factory preset levels using the Factory Default. See page E-46.</li> </ul>
Image isn't square to the screen	<ul style="list-style-type: none"> <li>Reposition the projector to improve its angle to the screen. See page E-22.</li> <li>Use the Keystone to correct the trapezoid distortion. See page E-45.</li> </ul>
Picture is blurred	<ul style="list-style-type: none"> <li>Adjust the focus. See page E-21.</li> <li>Reposition the projector to improve its angle to the screen. See page E-22.</li> <li>Ensure that the distance between the projector and screen is within the adjustment range of the lens. See page E-12.</li> </ul>
Image is scrolling vertically, horizontally or both	<ul style="list-style-type: none"> <li>Use menus or a source button on the remote control or the cabinet to select the source you want to input.</li> </ul>
Remote control does not work	<ul style="list-style-type: none"> <li>Install new batteries. See page E-10.</li> <li>Make sure there are no obstacles between you and the projector.</li> <li>Stand within 22 feet (7 m) of the projector. See page E-10.</li> </ul>
Status indicator is lit or blinking	<ul style="list-style-type: none"> <li>See the Power/ Status Light messages above.</li> </ul>
Cross color in RGB mode	<ul style="list-style-type: none"> <li>If Auto Adjust is off, turn it on. If Auto Adjust is on, turn it off and balance the image with the Position and Clock Adjust. See page E-43.</li> </ul>

# 8. SPECIFICATIONS

---

This section provides technical information about the GT2150 Projector's performance.

Model Number GT2150

## Optical

LCD Panel	1.3" p-Si TFT active-matrix with Micro Lens Array, 1366×1024 native resolution up to 1600×1200 with Advanced AccuBlend Technology
Lamp	250 W NSH lamp
Lamp Life	Eco-mode 2000 hours/Normal mode 1500 hours The lamp, under normal operating conditions, is warranted for 1500 hours of operation time within 6 months.
Lens Options	Motorized zoom (except GT10RL lens) and Motorized focus GT19ZL : F2.0-2.5 f=48.9-63.7mm GT13ZL : F2.3-2.8 f=34.5-42.5mm GT34ZL : F2.5-3.4 f=92.4-140.6mm GT10RL : F2.3 f=27mm
Lens Shift (GT19ZL and GT34ZL)	Vertical +/- 0.5V Horizontal +/- 0.25H
Image Size	GT19ZL/GT13ZL/GT10RL: 40 - 300 inches (1016 - 7620 mm) diagonal GT34ZL : 80-500 inches (2032-12700 mm) diagonal
Projection Distance	GT19ZL lens : 4.8 - 48.0 ft (1.5 - 14.6 m) GT10RL lens : 2.7-20.0 ft (0.8m-6.1m ) GT13ZL lens : 3.5-32.0 ft (1.1m-9.8m ) GT34ZL lens : 18.1-173.2 ft (5.5m-52.8m )
Projection Angle	GT19ZL: -9.0 degree (tele) / 11.7 degree (wide) GT13ZL: -13.3 degree (tele) / 16.4 degree (wide) GT34ZL: -4.0 degree (tele) / 6.2 degree (wide)

## Electrical

Input Connections	RGB/YCr/Cb/H(HV)V 5 BNC×1, RCA (L/MONO, R)×1 RGB D-Sub 15 pin×1, RCA (L/MONO, R)×1 DVI DIGITAL DVI-D (Max resolution : SXGA@60Hz) x 1, RCA (L/MONO, R)×1 Video BNC×1, RCA×1, RCA (L/MONO, R)×1 S-Video Mini DIN 4×1, RCA (L/MONO, R)×1 PC Card Slot×1
Output Connections	RGB DVI-D×1, D-Sub 15 pin×1, RCA (L/MONO, R)×1
Other Input/Output	Remote Control Stereo mini jack ;IN x 1; OUT×1 PC Control D-Sub 9 pin; IN×1;OUT×1 SW Control D-Sub 15×1 SC. TRIGGER Stereo mini jack×1
Input Compatibility	NTSC / PAL / PAL60 / SECAM / NTSC4.43, YCbCr Component, HDTV-1080I, 720p, 480p, 480I, VGA, SVGA, XGA, SXGA / UXGA (with Advanced AccuBlend)
Synchronization	Horizontal Frequency : 15 - 107 kHz (RGB : 24 kHz or over)
Range	Vertical Frequency : 48 - 120 Hz
Video Bandwidth	RGB: 100 MHz
Color Reproduction	Full color, 16.7 million colors simultaneously
Horizontal Resolution	550 TV lines : NTSC / PAL / NTSC4.43 / YCbCr 350 TV lines : SECAM RGB: 1024 dots horizontal, 768 dots vertical
Built-in Speakers	5W×2
Power Requirement	100 - 120VAC / 200 - 240 VAC, 50 / 60 Hz
Input Current	4.2 A (100 - 120 VAC) / 2.0A (200 - 240 VAC)

---

## Mechanical

Dimensions	16.5" (W) × 7.7" (H) × 19.4" (D) / 419 mm (W) × 195 mm (H) × 494 mm (D) (not including feet)
Net Weight	28.3 lbs / 12.8 kg (not including lens)
Environment	Operational Temperatures: 32° - 95°F (0° to 35°C), 20 - 80% humidity Storage Temperatures: 14° - 122°F (-10° to 50°C), 20 - 80% humidity
Regulations	UL Approved (UL 1950, CSA 950) Meets DOC Canada Class B requirements Meets FCC Class B requirements Meets AS/NZS3548 Class B Meets EMC Directive (EN55022, EN55024, EN61000-3-2, EN61000-3-3) Meets Low Voltage Directive (EN60950, TUV GS Approved)



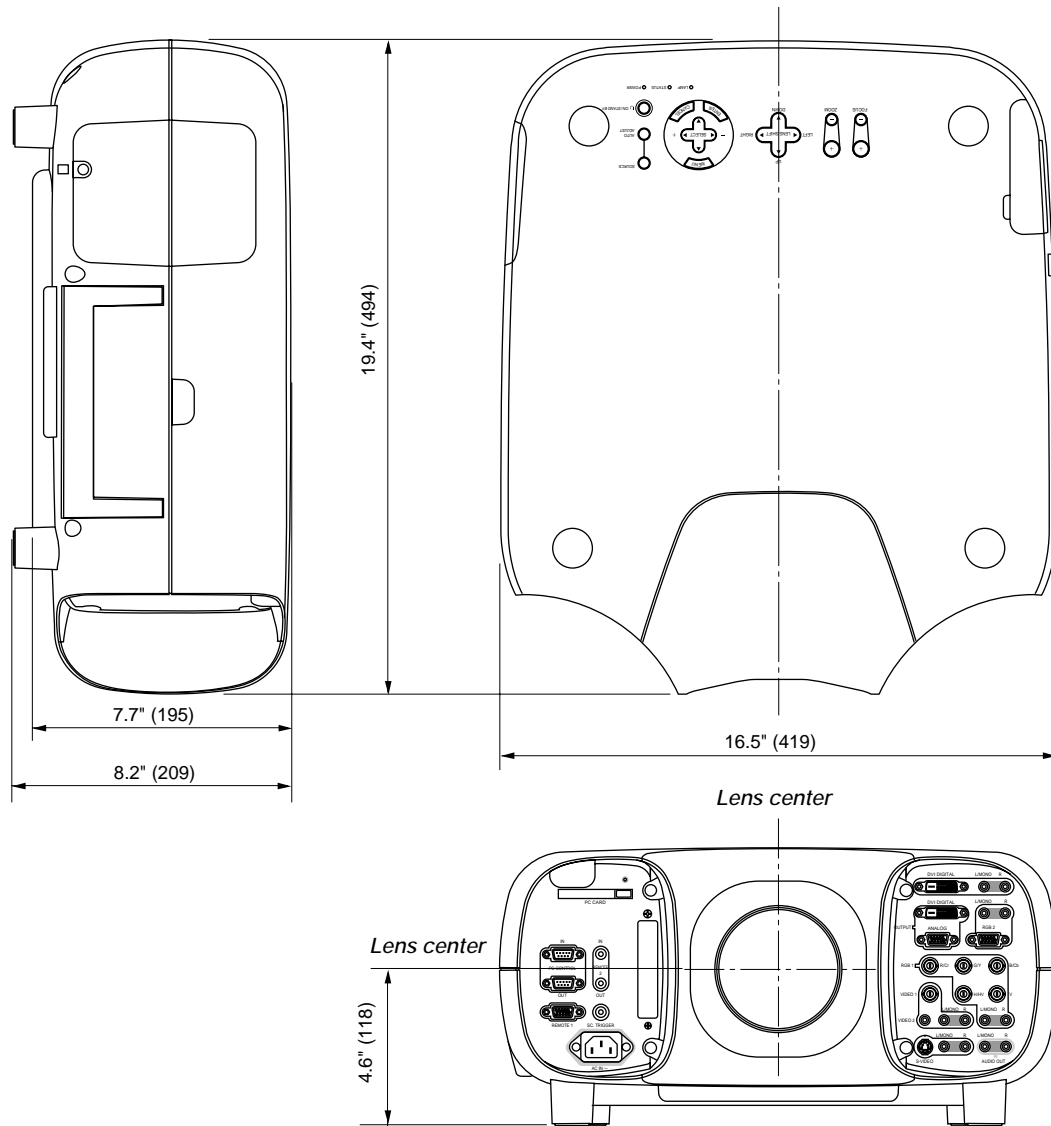
LCD panels are inherently susceptible to bad pixels. The LCD panel may have pixel failures at the rate of 0.01% or less.

We provide information about our projectors through the World Wide Web at <http://www.nec-pj.com/>

The specifications are subject to change without notice.

# 9. Appendix

## Cabinet Dimensions



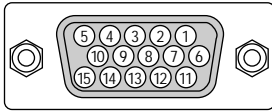
Unit = inch (mm)

## Optional Accessories

Lens	Optional lens (Fixed short throw: 1.0)	GT10RL
	Optional lens (Zoom: 1.3 – 1.6)	GT13ZL
	Optional lens (Zoom: 1.8 – 2.4)	GT19ZL
	Optional lens (Zoom: 3.4 – 5.2)	GT34ZL
Lamp	Replacement lamp	GT50LP
Ceiling Mount	Kit for ceiling mount installation	GT50CM
Expansion module	LAN module	GT50LAN
Remote Control	Presentation remote control kit	PR51KIT

## D-Sub Pin Assignments

### Mini D-Sub 15 Pin Connector (RGB2)



Signal Level  
 Video signal : 0.7Vp-p (Analog)  
 Sync signal : TTL level

Pin No.	RGB Signal (Analog)	YCbCr Signal
1	Red	Cr
2	Green or Sync on Green	Y
3	Blue	Cb
4	Ground	
5	Ground	
6	Red Ground	Cr Ground
7	Green Ground	Y Ground
8	Blue Ground	Cb Ground
9	No Connection	
10	Sync Signal Ground	
11	Ground	
12	Bi-directional DATA (SDA)	
13	Horizontal Sync or Composite Sync	
14	Vertical Sync	

## Compatible Input Signal List

Signal Name	Resolution (H×V)	Horizontal Frequency	Vertical Frequency
Video (NTSC)	640 × 480	15.734	60.0
Video (PAL/SECAM)	768 × 576	15.625	50.0
Video (HDTV)	640 × 480p	31.5	60.0
	1280 × 720p	45.0	60.0
	1920 × 1035i	33.75	60.0
	1920 × 1080i	28.13	50.0
	1920 × 1080i	33.75	60.0
IBM PC or Compatibles	640 × 350	31.5	70.0
	640 × 400	37.9	85.0
	720 × 400	37.0	85.0
	640 × 480	31.5	60.0
	640 × 480	37.9	72.8
	640 × 480	37.5	75.0
	640 × 480	43.3	85.0
	800 × 600	35.2	56.3
	800 × 600	37.9	60.3
	800 × 600	48.1	72.0
	800 × 600	46.9	75.0
	800 × 600	53.7	85.0
	1024 × 768	48.4	60.0
	1024 × 768	56.5	70.1
	1024 × 768	60.0	75.0
	1024 × 768	68.7	85.0
	1152 × 864	67.5	75.0
	1280 × 960	60.0	60.0
	1280 × 1024	64.3	60.0
	1280 × 1024	80.0	75.0
	1280 × 1024	91.1	85.0
	1600 × 1200	75.0	60.0
	1600 × 1200	81.3	65.0
1600 × 1200	87.5	70.0	
1600 × 1200	93.8	75.0	
1600 × 1200	106.3	85.0	
Apple Macintosh	640 × 480	34.9	66.6
	832 × 624	49.7	74.6
	1024 × 768	60.2	74.9
	1152 × 870	68.7	75.6
	1280 × 1024	64.3	60.4
	1280 × 1024	74.9	69.9
HP	1280 × 1024	78.1	72.0
SUN	1152 × 900	61.8	66.0
SGI	1280 × 1024	81.1	76.0
	1024 × 768	49.7	60.4
	1152 × 900	71.7	76.1
	1280 × 1024	63.9	60.0

### NOTE:

- \* The VGA, SVGA, XGA and UXGA signals are displayed with Advanced AccuBlend.
- \* Some composite sync signals may not be displayed correctly.
- \* Signals other than those specified in the table above may not be displayed correctly. If this should happen, change the refresh rate or resolution on your PC. Refer to Display Properties help section of your PC for procedures.
- \* UXGA can be supported for separate sync signal only.
- \* DVI digital signal can support a maximum resolution of SXGA@60Hz.

## List of Menu Items Available on Link Mode

See the table below for available functions in the digital link mode and the analog link mode.

Function			Link mode	
Menu	Source Select		L	
	Adjust(Source)	Picture	Brightness	L
			Contrast	L
			The others	N
		White Balance		N
		Image	Pixel Adjust (Phase)	L
			Position	L
			The others	N
		Video Adj		N
		Option Adj		N
		Signal Type		N
	Switcher		N	
	Volume		M	
	Ref Adj	Keystone		N
		Lamp Mode		N
		Ref. White Bal.		N
	Factory Default		N	
	Projector Options	Timer		L
		Menu		M
		Setup		N
		Link Mode		M
		Switcher Control		N
		LAN Mode		N
	Help		M	
	Test Pattern		N	
	Direct Button	LENS SHIFT	Projector	I
			Remote Control	N
FOCUS		Projector	I	
		Remote Control	I	
ZOOM		Projector	I	
		Remote Control	I	
MENU		Projector	L (*1)	
		Remote Control	L (*1)	
POWER		Projector	L (*2)	
POWER ON		Remote Control	L (*2)	
POWER OFF		Remote Control	L (*2)	
INPUT		Remote Control	L (*1)	
MUTE(PICTURE)		Remote Control	L (*1)	
MUTE(OSD)		Remote Control	L (*1)	
MUTE(SOUND)		Remote Control	L (*1)	
VOLUME		Projector	Display ON	L (*1)
			Display OFF	L (*1)
		Remote Control	Display ON	L (*1)
			Display OFF	L (*1)
KEYSTONE		Remote Control	N	
AUTO		Projector	N	
	Remote Control	N		
SOURCE	Projector	L (*1)		
TEST	Remote Control	N		
PC Control	All		No restriction. Comply with the above specifications.	

\*1 Each adjustment is not possible on the slave projector in the link mode.

\*2 Each adjustment is possible on the slave projector in the link mode.

Each letter used in the above note means the following

Letter	Master projector	Slave projector (s)
L	valid	linked
N	invalid	invalid
M	valid	invalid
I	independently adjustable	independently adjustable



## PC Control Codes

Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT RGB 1	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT RGB 2	02H 03H 00H 00H 02H 01H 02H 0AH
INPUT SELECT VIDEO 1	02H 03H 00H 00H 02H 01H 06H 0EH
INPUT SELECT VIDEO 2	02H 03H 00H 00H 02H 01H 07H 0FH
INPUT SELECT S-VIDEO	02H 03H 00H 00H 02H 01H 0BH 13H
INPUT SELECT DVI (DIGITAL)	02H 03H 00H 00H 02H 01H 1AH 22H
PICTURE MUTE ON	02H 10H 00H 00H 00H 12H
PICTURE MUTE OFF	02H 11H 00H 00H 00H 13H
SOUND MUTE ON	02H 12H 00H 00H 00H 14H
SOUND MUTE OFF	02H 13H 00H 00H 00H 15H
ON SCREEN MUTE ON	02H 14H 00H 00H 00H 16H
ON SCREEN MUTE OFF	02H 15H 00H 00H 00H 17H

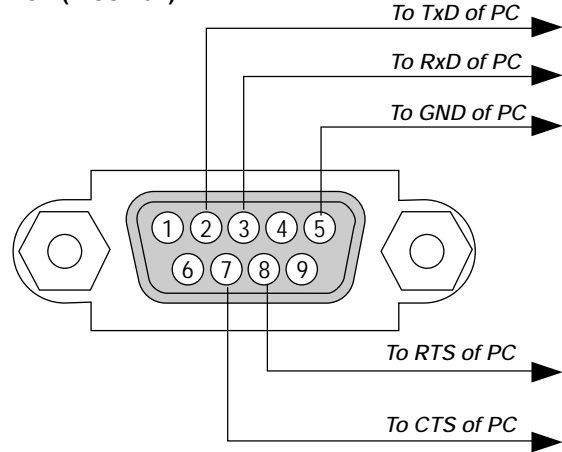
**NOTE:** Contact your local dealer for a full list of the PC Control Codes if needed.

## Cable Connection

### Communication Protocol

Baud rate: 38400 bps  
 Data length: 8 bits  
 Parity: No parity  
 Stop bit: One bit  
 X on/off: None  
 Communications procedure: Full duplex

### OPTION (D-SUB 9P)



**NOTE:** Pins 1, 4, 6 and 9 are used inside the projector.

**NOTE::** Jumper "Request to Send" and "Clear to Send" together on both ends of the cable to simplify cable connection.

## Gravity Stack

Up to two units can be gravity stacked without external support. In some cases, however, two images will not align on the screen correctly. This will become more apparent when displaying small text and detailed graphics.

### 1. Note : Gravity Stacking Two GT2150 Projectors

The optional lenses for GT2150 have different geometrical distortions in wide zoom and tele. Select the best zoom position for stacking where the geometrical distortion is as small as possible. The recommended throw distances are as follows:

Screen Size (Diagonal)	Throw Distance					
	GT19ZL		GT13ZL		GT34ZL	
	m	inch	m	inch	m	inch
40"	1.7	66.9	1.0	39.4	-	-
60"	2.6	102.4	1.6	63.0	-	-
80"	3.5	137.8	2.1	82.7	6.7	263.8
100"	4.4	173.2	2.7	106.3	8.4	330.7
120"	5.3	208.7	3.2	126.0	10.1	397.6
150"	6.7	263.8	4.0	157.5	12.6	496.1
200"	8.9	350.4	5.4	212.6	16.8	661.4
240"	10.7	421.3	6.4	252.0	20.2	795.3
300"	13.4	527.6	8.1	318.9	25.2	992.1
350"	-	-	-	-	29.4	1157.5
400"	-	-	-	-	33.6	1322.8
450"	-	-	-	-	37.8	1488.2
500"	-	-	-	-	42.0	1653.5

#### • Lens position

Horizontal lens position must be as close to the center of the lens opening as possible.

### 2. Note: Gravity Stacking in link mode

A distribution amplifier is recommended for Gravity stacking in link mode to distribute one input source to two projectors.

### 3. Note: Gravity stacking in link mode without a distribution amplifier

In this configuration, horizontal position of each projector will need to be adjusted before enabling Link mode. This adjustment will prevent image alignment.

**NEC**